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A special thank you to Ghislaine Polak and the late Ernest Polak for supporting the Polak Young Investigators Awards and the Junior Scientist Travel Awards.

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2009 Annual Meeting Exhibitors

**Oxford University Press**
Oxford University Press publishes some of the world’s most respected books and journals, including Chemical Senses. The journal publishes original research and review papers on all aspects of chemoreception in both humans and animals. Please visit us online at www.oxfordjournals.org.

*Company Representative:* Claire Bird

**Sensonics, Inc**
Sensonics, Inc., manufactures and distributes quantitative smell and taste tests. The Smell Identification Test™, has been translated into several languages and is the standard means for assessing olfactory function throughout the world. Visit www.sensonics.com for more information about our products and services.

*Company Representatives:* Dr. Richard L. Doty and Paul Marone

**Springer**
Springer is the proud publisher of Chemosensory Perception, now in its second year of publication, and recently accepted by ISI. Please stop by our booth to pick up a sample copy, as well as browse our books (available at the conference discount) and other journals. Susan Safren will be available to answer any questions about publishing with Springer.

*Company Representative:* Susan Safren

**Osmic Enterprises, Inc.**
Osmic Enterprises, Inc. produces and distributes the OLFAC™ Test Battery, a series of computerized tests to assess olfactory function. Tests include a threshold test, an identification test, a discrimination test, and an odor memory test. Stimuli are generated via a miniature olfactometer, with administration of tests and recording of responses under computer control.

*Company Representative:* Kathleen VanDeGrift
2009 Awardees

31st Annual Givaudan Lectureship - Givaudan Corporation
Carla J. Shatz, Stanford University

18th Annual Moskowitz Jacobs Award for Research in Psychophysics of Taste and Olfaction
Johan Lundström, Monell Chemical Senses Center

16th Annual Ajinomoto Award to Promising Young Researcher in the Field of Gustation
Alan Carleton, Brain Mind Institute, Ecole Polytechnique, Fédérale de Lausanne

International Flavors and Fragrances Award for Outstanding Research on the Molecular Basis of Taste
Keiko Abe, The University of Tokyo

Max Mozell Award for Outstanding Achievement in the Chemical Senses
Charles Greer, Yale University School of Medicine

The AChemS Young Investigator Award for Research in Olfaction
Nathaniel Urban, Carnegie Mellon University

AChemS Distinguished Service Award
Barry Davis, National Institute of Health

The Don Tucker Memorial Award (2008 Awardee)
Aaron Beyerlein, University of Arizona

AChemS 2009 Logo Contest Award
Maria Veldhuizen, John B. Pierce Laboratory and Yale University School of Medicine

The Polak 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

2009 Polak Young Investigator Award Recipients:
Wen Li, University of Wisconsin-Madison
Nathalie Mandairon, Lyon University
Ivan Manzini, University of Göttingen
Koichi Matsumara, Monell Chemical Senses Center
Arie Mobley, Department of Neurosurgery, Department of Neurobiology, Yale University
Sharif Taha, University of Utah School of Medicine
Maria Veldhuizen, John B. Pierce Laboratory and Yale University School of Medicine
We are pleased to announce that five 2009 Polak Junior Scientist Travel Awards were given for this year’s meeting.

AChemS Minority/Travel Fellowship Recipients

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

Juan Aggio, Georgia State University
C. Shawn Dotson, University of Maryland School of Medicine
Wombura Fobbs, John B. Pierce Laboratory and Yale University School of Medicine
Kristina Gonzalez, Clark University
Ernesto Salcedo, University of Colorado Denver
Nhat-Tuan Tran, University of Colorado Denver
Robert Utsman, University of Minnesota

AChemS Student Housing and Travel Award Recipients

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

Lindsey Silz; Richard Krolewski; Adam Packard; Allana Goodman; Krystin Corby; Faye Pesenti; Anna Kleeman; April Glatt; Chun Yang; Kaeli Samson; Samsudeen Ponissery

Rebekka Zernecke; Sara Dudgeon; Johanna Spitzer; Amanda Elson; Sebastian Rasche; Amy Gordon; Lian Gelis; Matthias Luebbert; Debbie Radtke; Masashi Tabuchi

Honghong Zhang; Andrew Rosen; Alexandra Miller; Kristin Rudenga; Julie Boyle; Markus Rothermel; Sabrina Baumgart; Silke Hagendorf; Jeremy McIntyre; Dorothee Buschhuter
Committees

AChemS Executive Committee 2008–2009

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MEETING EVALUATION
The meeting evaluation is available online this year. Please visit www.achems.org after the meeting to give us your feedback on the meeting. A reminder email will be sent. Your input helps AChemS' leadership continue to offer quality annual meetings and member services.
**Wednesday, April 22, 2009**

12:00 - 3:30 pm  **ACHEMS EXECUTIVE COMMITTEE MEETING**  
*Executive Boardroom*

3:30 - 8:00 pm  **REGISTRATION**  
*Prefunction Area*

6:00 - 8:00 pm  **WELCOME BANQUET (Ticketed event)**

8:00 - 9:00 pm  **WELCOME/AWARDS CEREMONY**  
*South Ballroom*

9:00 - 10:00 pm  **GIVAUDAN LECTURE**  
**TUNING UP CIRCUITS: BRAIN WAVES, IMMUNE GENES AND SYNAPSE PLASTICITY**  
Chair/Organizer: D. Wilson  
Carla J. Shatz, Stanford University, Stanford, CA, United States  
*South Ballroom*
Thursday, April 23, 2009

7:00 am – 1:00 pm  REGISTERATION
                     Prefunction Area

7:30 – 9:00 am  CONTINENTAL BREAKFAST

8:00 – 10:00 am  PLATFORM PRESENTATIONS
                     GUSTATION
                     South Ballroom

8:00 am - 12:30 pm  POSTER SESSION I: CHEMOSENSORY DISORDERS,
                     MODELS AND AGING/CENTRAL CHEMOSENSORY
                     CIRCUITS
                     North Ballroom

10:00 – 10:30 am  BREAK
                     Prefunction Area

10:30 am - 12:30 pm  SYMPOSIUM
                     GENDER EFFECTS ON OLFATORY PROCESSING
                     Chair/Organizer: L. Stowers
                     South Ballroom

12:30 - 2:00 pm  LUNCHEON: MINORITY TRAVEL AWARDEES
                     (Invitation only)
                     Executive Boardroom

1:00 - 4:00 pm  INDUSTRY SYMPOSIUM
                     Chair/Organizer: M. Meredith
                     South Ballroom

2:10 - 2:25 pm  BREAK
                     Prefunction Area

3:00 - 5:00 pm  NIH WORKSHOP: FUNDING OPPORTUNITIES FOR
                     THE NEW INVESTIGATOR
                     Chair/Organizer: B. Davis
                     Tropics Room

4:15 – 6:00 pm  INDUSTRY RECEPTION (Ticketed event)
                     The Boathouse

7:00 - 11:00 pm  POSTER SESSION II: CHEMOSENSORY RESPONSE TO,
                     AND CONTROL OF, FEEDING/NEUROETHOLOGY
                     North Ballroom

7:00 - 9:05 pm  SYMPOSIUM
                     PRESIDENTIAL SYMPOSIUM: ON BEYOND
                     GLOMERULI
                     Chair/Organizer: P. Brunjes
                     South Ballroom
Friday, April 24, 2009

7:30 am – 1:00 pm  REGISTRATION
Prefunction Area

7:30 – 9:00 am  CONTINENTAL BREAKFAST

8:00 - 10:30 am  SYMPOSIUM
DEVELOPMENT AND PLASTICITY: FIRST CENTRAL
CHEMOSENSORY RELAYS
Chair/Organizer: C. Mistretta and D. Hill
South Ballroom

8:00 am - 12:30 pm  POSTER SESSION III: CORTICAL CHEMOSENSORY
PROCESSING/RECEPTOR GENOMICS AND
MOLECULAR BIOLOGY
North Ballroom

10:30 – 11:00 am  BREAK
Prefunction Area

11:00 am - 12:30 pm  PLATFORM PRESENTATIONS
POLAK YOUNG INVESTIGATOR AWARD WINNERS
South Ballroom

12:45 - 2:45 pm  ACHEMS BUSINESS MEETING
South Ballroom

3:00 - 4:00 pm  NIH WORKSHOP: EVERYTHING YOU WANTED TO
KNOW ABOUT CHANGE IN NIH PEER REVIEW, BUT
WERE AFRAID TO ASK
Chair/Organizer: NIDCD Scientific Review Branch
Florida Room

5:00 - 7:00 pm  CHEMS SOCIAL (ACHEMS MEMBERS ONLY;
RSVP REQUIRED)
Chair/Organizer: S. Sollars
Tropics Room

7:00 - 8:00 pm  IFF SPECIAL LECTURE
TASTE MOLECULAR BIOLOGY AND NEW FOOD
CHEMISTRY
Chair/Organizer: S. Herness,
Keiko Abe, The University of Tokyo
South Ballroom
Friday, April 24, 2009, continued

7:00 - 11:00 pm  POSTER SESSION IV: CHEMOSENSORY TRANSDUCTION AND PERIRECEPTOR EVENTS
North Ballroom

8:00 – 8:15 pm  BREAK
Prefunction Area

8:15 - 10:15 pm  SYMPOSIUM
RECIPROCAL INTERACTIONS BETWEEN PRIMARY TASTE AND OLFACTORY PROCESSING NETWORKS AND HIGHER COGNITION
Chair/Organizer: L. Hermer-Vasquez
South Ballroom
Saturday, April 25, 2009

7:30 am – 1:00 pm  REGISTRATION
Prefunction Area

7:30 – 9:00 am  CONTINENTAL BREAKFAST

8:00 - 10:05 am  SYMPOSIUM
FUNCTIONAL EVOLUTION OF CHEMOSENSORY RECEPTORS
Chair/Organizer: H. Matsunami and H. Zhuang
South Ballroom

8:00 am - 12:30 pm  POSTER SESSION V: CHEMOSENSORY MEMORY/CENTRAL SYNAPTIC PHYSIOLOGY/NEUROGENESIS
North Ballroom

10:05 – 10:30 am  BREAK

10:30 am - 12:30 pm  SYMPOSIUM
MAKING SENSE OF FAT TASTE
Chair/Organizer: T. Gilberston
South Ballroom

12:45 - 2:45 pm  CLINICAL LUNCHEON (Ticketed event)
OLFACTORY DYSFUNCTION IN SCHIZOPHRENIA:
A MODEL SYSTEM TO INVESTIGATE DEVELOPMENTAL NEUROPATHOLOGY
Chair/Organizer: C. Murphy
Bruce Turetsky, MD, University of Pennsylvania
The Keys Room

3:00 - 5:30 pm  WORKSHOP: COMPUTATIONAL PROBLEMS IN SEQUENTIAL STAGES OF ODOR PROCESSING
Chair/Organizer: T. Cleland and D. Dougherty
South Ballroom

7:00 - 9:05 pm  SYMPOSIUM
FOLLOW THE HEAD, NOT ONLY THE NOSE:
TOP-DOWN INFLUENCES ON OLFACTORY PERCEPTION
Chair/Organizer: M. Smeets
South Ballroom

7:00 - 11:00 pm  POSTER SESSION VI: CHEMOSENSORY DEVELOPMENT AND PSYCHOPHYSICS I
North Ballroom
Sunday, April 26, 2009

7:30– 11:00 am  REGISTRATION  
Prefunction Area

7:30 – 9:00 am  CONTINENTAL BREAKFAST

8:00 - 10:05 am  SYMPOSIUM  
GABA IN THE DEVELOPING OLFATORY SYSTEM: FROM GENERATION TO DIFFERENTIATION  
Chair/Organizer: H. Baker  
South Ballroom

8:00 am - 12:30 pm  POSTER SESSION VII: CHEMOSENSORY PSYCHOPHYSICS II  
North Ballroom

10:05 – 10:30 am  BREAK  
Prefunction Area

10:30 am - 12:30 pm  PLATFORM PRESENTATIONS  
OLFACTORY AND VOMERONASAL SYSTEMS  
South Ballroom
Wednesday, April 22, 2009

12:00 - 3:30 pm  ACHEMS EXECUTIVE COMMITTEE MEETING  
            Executive Boardroom

3:30 - 8:00 pm  REGISTRATION  
            Prefunction Area

6:00 - 8:00 pm  WELCOME BANQUET (Ticketed event)

8:00 - 9:00 pm  WELCOME/AWARDS CEREMONY  
            South Ballroom

9:00 - 10:00 pm  GIVAUDAN LECTURE  
            Chair/Organizer: Donald Wilson  
            South Ballroom

#1  TUNING UP CIRCUITS: BRAIN WAVES, IMMUNE GENES AND SYNAPSE PLASTICITY  
Carla J. Shatz, Stanford University, Stanford, CA, United States  
South Ballroom

The Shatz lab studies how sensory experience tunes up brain circuits during critical periods of development. She will discuss surprising new findings that suggest that genes previously thought to be used only by the immune system function in neurons as “molecular brakes” on activity-dependent synaptic plasticity, both during development and in adulthood.
Thursday, April 23, 2009

7:00 am - 1:00 pm
REGISTRATION
Prefunction Area

7:30 - 9:00 am
CONTINENTAL BREAKFAST

8:00 - 10:00 am
PLATFORM PRESENTATIONS
GUSTATION
South Ballroom

8:00 #2 Wnt/β-catenin Signaling Controls Taste Bud Regeneration in Mice
Linda A. Barlow¹, Fei Liu², Shoba Thirumangalathu¹, Elizabeth A. Harvey¹, Ping Wu¹, Sarah E. Millar³. ¹Department of Cell and Developmental Biology & Rocky Mountain Taste & Smell Center, University of Colorado Denver, School of Medicine, Aurora, CO, United States, ²Institute for Regenerative Medicine at Scott & White Hospital, Texas A&M University System Health Science Center, Temple, TX, United States, ³Department of Dermatology and Cell and Developmental Biology, University of Pennsylvania School of Medicine, Philadelphia, PA, United States

8:15 #3 Fatty acids induce increases in intracellular calcium in Type II and a subset of Type III mouse taste cells
Pin Liu, Bhavik Shah, Hala Hadawar, Timothy Gilbertson. Department of Biology and The Center for Advanced Nutrition, Utah State University, Logan, UT, United States

8:30 #4 GPR40 knockout mice have diminished taste responses to fatty acids
Sami Damak¹, Cristina Cartoni¹, Keiko Yasumatsu², Johannes le Coutre¹, Yuzo Ninomiya². ¹Nestlé Research Center, Lausanne, Switzerland, ²Kyushu University, Fukuoka, Japan

8:45 #5 Thermal taste: association with perception of oral sensations and food and beverage behavior
Martha R Bajec, Gary J Pickering. Brock University, St Catharines, ON, Canada
9:00 #6  TRPA1 Sensory Agonism in Humans: Time Dependence
*University of California, San Diego, La Jolla, CA, United States*

9:15 #7  Oral Disinhibition Varies With Taster Status: Unilateral Anterior Oral Anesthesia Produces Asymmetric Posterior Taste Loss in Nontasters
Derek J. Snyder¹,², Frank A. Catalanotto², Patrick A. Antonelli³, Linda M. Bartoshuk². ¹*Neuroscience, Yale University, New Haven, CT, United States, ²Center for Smell and Taste, University of Florida, Gainesville, FL, United States, ³Otolaryngology, University of Florida, Gainesville, FL, United States*

#8  Withdrawn

9:30 #9  “Restained Eaters” Show Abnormal and Differential fMRI Activation to Sucrose and Saccharin
Claire Murphy¹,², Nobuko Kemmotsu¹,². ¹*San Diego State University, San Diego, CA, United States, ²University of California, San Diego, San Diego, CA, United States*
10:00 - 10:30 am  **BREAK**  
Prefunction Area

10:30 am - 12:30 pm  **SYMPOSIUM**  
GENDER EFFECTS ON OLFACTORY PROCESSING  
Chair/Organizer: Lisa Stowers  
*South Ballroom*

10:30  #10  
Axons of gustatory receptor 32a expressing neurons extend their terminal throughout adult lifetime  
Tetsuya Miyamoto, Hubert Amrein.  
*Department of Molecular Genetics and Microbiology, Duke University Medical Center*

10:50  #11  
Recognition of Sexual Cues in the Urine by Mouse Vomeronasal Organ  
Ron Yu1,2, Jie He1, Limei Ma1, Sangseong Kim1, Junichi Nakai3.  
1Stowers Institute, Kansas City, MO, United States,  
2University of Kansas Medical Center, Kansas City, KS, United States,  
3RIKEN Brain Institute, Wako-shi, Japan

11:10  #12  
Vomeronasal reception of a sex peptide pheromone ESP1 in mice: the receptor, neural circuitry, and behavior  
Kazushige Touhara. *Department of Integrated Biosciences, The University of Tokyo, Chiba, Japan*

11:30  #13  
Differential Sensory Neuron Activation Underlies Gender Dimorphic Aggressive Behavior  
Lisa Stowers1, Pablo Chamero2, Kelly Flanagan1, Fabio Papes3, Darren DW Logan1, Toby F Marton4, Angeldeep Kaur1.  
1The Scripps Research Institute, La Jolla, CA, United States,  
2University of Saarland, Homberg, Germany, 3State University of Campinas, Campinas, Brazil, 4University of California San Diego, San Diego, CA, United States

11:50  #14  
Opposite-sex volatile urinary odors detected by the main and processed via the accessory olfactory system contribute to mate recognition in mice  
Michael J. Baum1, Ningdong Kang1, Kristine M. Martel1, James A. Cherry2. *Dept. of Biology, Boston University, Boston, MA, United States, 2Dept. of Psychology, Boston University, Boston, MA, United States*

12:10  #15  
Neural control of sexually dimorphic behaviors  
Nirao Shah. *UCSF, San Francisco, CA, United States*
12:30 - 2:00 pm  LUNCHEON: MINORITY TRAVEL AWARDEES  
(Invitation only)  
The Minority Travel Awards are funded by a generous grant from the NIDCD  
Executive Boardroom

1:00 - 4:00 pm  SYMPOSIUM  
INDUSTRY SYMPOSIUM  
Chair/Organizer: Mike Meredith  
South Ballroom

TASTE AND SMELL IN TRANSLATION:  
APPLICATIONS FROM BASIC RESEARCH  
An exploration of recent key advances in the chemical senses -  
of interest to industry scientists and also to basic scientists.  
The speakers will focus on two or a few recent advances in  
basic research that have potential applications. The speakers  
will take the time to explain the basic science background  
behind their examples for an audience that cannot be expert in  
all relevant areas. The audience will include industry scientists  
and policy makers as well as basic scientists and students new  
to the field, interested in applications of basic research.  
The symposium will conclude with a round-table discussion  
with audience participation. Our goal is to explore how  
collaborations between industry and academic scientists  
can benefit both, but particularly how basic-science expertise  
can contribute.

1:00  
Introduction: Taste and Smell in Translation  
Michael Meredith, Ph.D., Neuroscience, Florida State  
University, Tallahassee, FL, USA

1:03  
Economic stimulus: When chemicals meet receptors  
on the tongue  
Danielle Reed, Ph.D., Monell Chemical Senses Center,  
Philadelphia PA, USA

1:36  
Recent Advances in Understanding Olfactory Perception  
Thomas Hummel, M.D., Otorhinolaryngology,  
University of Dresden, Dresden, Germany
2:10 - 2:25 pm  COFFEE BREAK
Prefunction Area

2:25  Recent Advances in Understanding Taste Molecular Mechanisms
Nirupa Chaudhari, Ph.D., Physiology and Biophysics, University of Miami, Miami, FL, USA

2:58  Recent Advances in Understanding Olfactory Molecular Mechanisms
Stuart Firestein, Ph.D., Biology, Columbia University, New York, NY, USA

3:35 - 4:05 pm  Round Table Discussion

The symposium will be followed by a reception with buffet and cash bar: An opportunity for industry participants to network and to interact one-on-one with the symposium speakers and other interested basic scientists.

3:00 - 5:00 pm  NIH WORKSHOP: FUNDING OPPORTUNITIES FOR THE NEW INVESTIGATOR
Chair/Organizer: Barry Davis
Come learn or get refreshed on how to compete for NIH funding.
Tropics Room

4:15 - 6:00 pm  INDUSTRY RECEPTION
(Ticketed event)
An opportunity for industry scientists to network and interact with basic scientists including the distinguished speakers from the symposium. Buffet included with ticket.
The Boatouse
8:00 am - 12:30 pm  POSTER SESSION I: CHEMOSENSORY DISORDERS, MODELS AND AGING/CENTRAL CHEMOSENSORY CIRCUITS
North Ballroom

1  #P1  Taste disturbances after tonsillectomy - results of a prospective study
Clemens Heiser, Sabine Frey, Karl Hörmann, Boris Stuck.
Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Mannheim, Mannheim, Germany

2  #P2  Long-term olfactory outcome in patients with mild traumatic brain injuries (mTBI)
Faye Pesenti, Alain Ptito, Jelena Djordjevic. Montreal Neurology Institute, McGill University, Montreal, QC, Canada

3  #P3  Volatile biomarkers for human melanoma cells
Jae Kwak¹, Hakan Ozdener¹, Michelle Gallagher¹, Charles J Wysocki¹, Adam Faranda¹, Amaka Isamah¹, Steve S Fakharzadeh², Christopher J Miller², George Preti¹².
¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Department of Dermatology, School of Medicine, University of Pennsylvania, Philadelphia, PA, United States

4  #P4  Olfactory function in childhood maltreatment and post-traumatic stress disorder
Ilona Croy¹², Julia Schellong³, Peter Joraschky².
¹Universitätsklinikum Carl Gustav Carus Department of Otorhinolaryngology, Dresden, Germany, ²Universitätsklinikum Carl Gustav Carus Department of Psychotherapie and Psychosomatic Medicine, Dresden, Germany

5  #P5  “Anosmic smell”: Residual olfactory function following hemispherectomy
Jelena Djordjevic, Faye Pesenti, Alain Ptito. Montreal Neurological Institute, McGill University, Montreal, QC, Canada
The perception of malodors: An fMRI study of age and gender related differences between pre and post puberty subjects
Thomas Hummel\textsuperscript{1}, Arianne Baur\textsuperscript{1}, Cornelia Hummel\textsuperscript{1}, Anita Chopra\textsuperscript{2}. \textsuperscript{1}Smell & Taste Clinic, University of Dresden Medical School, Dresden, Germany, \textsuperscript{2}Unilever Research and Development Port Sunlight, Wirral, United Kingdom

Odor judgments in first episode and chronic schizophrenia patients
Claudia I. Rupp\textsuperscript{1}, Georg Kemmler\textsuperscript{1}, Thomas Walch\textsuperscript{1}, Arne W. Scholz\textsuperscript{2}, Martina Klimbacher\textsuperscript{1}, Theresia Lechner\textsuperscript{1}, Hartmann Hinterhuber\textsuperscript{1}, Wolfgang W. Fleischhacker\textsuperscript{1}. \textsuperscript{1}Innsbruck Medical University, Department of Psychiatry and Psychotherapy, Innsbruck, Austria, \textsuperscript{2}Innsbruck Medical University, Department of Otorhinolaryngology, Innsbruck, Austria

Odor Discrimination in Mouse Models of Schizophrenia
Jennifer L. Hellier\textsuperscript{1,2}, Nicole L. Arevalo\textsuperscript{1,2}, Catherine E. Adams\textsuperscript{3}, Diego Restrepo\textsuperscript{1,2,4}. \textsuperscript{1}Dept. of Cell & Developmental Biology, Univ. of Colorado Denver, Aurora, CO, United States, \textsuperscript{2}Rocky Mountain Taste & Smell Center, Univ. of Colorado Denver, Aurora, CO, United States, \textsuperscript{3}Dept. of Psychiatry, Univ. of Colorado Denver, Aurora, CO, United States, \textsuperscript{4}Program in Neuroscience, Univ. of Colorado Denver, Aurora, CO, United States

A Timeline for Parkinson’s Disease
Christopher H Hawkes\textsuperscript{1}, Kelly Del Tredici\textsuperscript{2}, Heiko Braak\textsuperscript{2}. \textsuperscript{1}Barts and the London School of Medicine, London, United Kingdom, \textsuperscript{2}Institute for Clinical Neuroanatomy, Frankfurt am Main, Germany

Functional MRI (fMRI) in Parkinson’s disease patients reveals differences according to the degree of hyposmia
Antje Welge-Luessen\textsuperscript{1}, Elise Wattendorf\textsuperscript{2}, Uta Schwerdtfeger\textsuperscript{2}, Peter Fuhr\textsuperscript{3}, Deniz Bilecen\textsuperscript{4}, Thomas Hummel\textsuperscript{1}, Birgit Westermann\textsuperscript{1,6}. \textsuperscript{1}Dept. of Otorhinolaryngology, University Hospital, Basel, Switzerland, \textsuperscript{2}Dept. of Otorhinolaryngology, Kantonsspital, Aarau, Switzerland, \textsuperscript{3}Dept. of Neurology, University Hospital, Basel, Switzerland, \textsuperscript{4}Dept. of Radiology, University Hospital, Basel, Switzerland, \textsuperscript{5}Smell & Taste Clinic, University of Dresden Medical School, Dresden, Germany, \textsuperscript{6}Dept. of Neurosurgery, University Hospital, Basel, Switzerland
11 #P11 Scent marking and countermarking behaviors as a measure of olfactory communication in the BTBR T+tf/J inbred strain, a mouse model of autism
Florence I. Roulet, Markus Wöhr, Mu Yang, Jacqueline N. Crawley. Laboratory of Behavioural Neuroscience - National Institute of Mental Health, Bethesda, MD, United States

12 #P12 Taste damage following radiation treatment for head and neck cancer

13 #P13 The use of odours as emotional triggers in the study of dysfunctional brain regions in bipolar disorder – an fMRI study
Simona Negoias¹, Emilia Iannilli¹, Stephanie Krueger², Johannes Gerber³, Thomas Hummel¹. ¹Smell & Taste Clinic, Department of Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany, ²Department of Neuroradiology, University of Dresden Medical School, Dresden, Germany, ³Department of Psychiatry and Psychotherapy, Charité University Medicine Berlin, Campus Mitte, Berlin, Germany

14 #P14 Mind over age - Social priming and olfactory function
Eva C. Alden¹, Amy R. Gordon¹, Monica Hernandez¹, Mats J. Olsson², Johan N. Lundstrom¹, ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Department of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden

15 #P15 Faster Cognitive Processing of Olfactory Stimuli in an Active Task, Even in Old Age
Charlie D. Morgan¹, Krystin M. Corby¹, Claire Murphy¹, ¹San Diego State University, Department of Psychology, San Diego, CA, United States
16 #P16 Functional Connectivity of Olfactory Processing During a Hedonic Evaluation Task in Young and Older Adults
Erin R. Green¹, Lori Haase¹, Claire Murphy¹². ¹San Diego State University/University of California, San Diego Joint Doctoral Program in Clinical Psychology, San Diego, CA, United States, ²Department of Surgery, University of California, San Diego, San Diego, CA, United States

17 #P17 Functional Connectivity during an olfactory recognition memory paradigm is associated with task performance and the e4 allele of the apolipoprotein E (ApoE) gene
Lori Haase¹, Erin Green¹, Claire Murphy¹². ¹SDSU/UCSD Joint Doctoral Program in Clinical Psychology, San Diego, CA, United States, ²Department of Surgery, UCSD, San Diego, CA, United States

18 #P18 Olfactory, but not Gustatory Function, correlates with BMI and Depressive Symptoms in the Elderly
Sanne Boesveldt¹, Thomas Hummel², Stacy Tessler Lindau³, Johan N Lundstrom¹⁴. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Dept. of Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany, ³Dept. of Obstetrics and Gynecology, University of Chicago, Chicago, IL, United States, ⁴Dept. of Psychology, University of Pennsylvania, Philadelphia, PA, United States

19 #P19 Prevalence of Olfactory Impairment in Adults across the Life Span: The Beaver Dam Offspring Study
Carla R. Schubert¹, Karen J. Cruickshanks¹, Elizabeth M. Krantz¹, Guan-Hua Huang², Barbara E.K. Klein¹, Ronald Klein¹, James S. Pankow³. ¹University of WI, Madison, WI, United States, ²Nat. Chiao Tung Univ., Hsinchu, Taiwan, ³University of MN, Minneapolis, MN, United States

20 #P20 ApoE Status and Differences in Olfactory Detection Across the Lifespan
Krystin M. Corby¹, Charlie D. Morgan¹, Claire Murphy¹². ¹San Diego State University, San Diego, CA, United States, ²University of California Medical Center, San Diego, CA, United States
21  #P21  Influence of Cognitive Status on Olfactory Threshold Variability
Brittany N. Carlisle¹, Jason M. Bailie¹, Lloyd Hastings², Katie Pointer¹, Katie VanDeGrift¹, Robert A. Frank³, ¹University of Cincinnati, Cincinnati, OH, United States, ²Osimic Enterprises, Cincinnati, OH, United States, ³CompuSniff, Cincinnati, OH, United States

22  #P22  Olfactory Perceptual Correlates of β-Amyloid Plaque Burden in Alzheimer’s Disease Mouse Models
Daniel W. Wesson¹, Efrat Levy²,³, Ralph A. Nixon²,³, Donald A. Wilson¹,³, ¹Emotional Brain Inst., Nathan Kline Inst. for Psych Research, Orangeburg, NY, United States, ²Ctr. for Dementia Research, Nathan Kline Inst. for Psych Research, Orangeburg, NY, United States, ³New York Univ School of Medicine, New York, NY, United States

23  #P23  Toxin-Induced Chemosensory Dysfunction: A Case Series and Review
Wendy M. Smith¹, Terence M. Davidson¹,²,³, Claire L. Murphy¹,⁴, ¹Department of Surgery, University of California, San Diego, San Diego, CA, United States, ²Continuing Medical Education, University of California, San Diego School of Medicine, San Diego, CA, United States, ³VA San Diego Healthcare System, San Diego, CA, United States, ⁴San Diego State University, San Diego, CA, United States

24  #P24  Gene-targeted deletion of E2F1 evokes olfactory deficits, memory loss, and increased anxiety
David R. Marks, Ying Wang, Kelly Jordan-Sciutto. University of Pennsylvania, Philadelphia, PA, United States

25  #P25  Social Anxiety and Reduced Recruitment of Orbitofrontal Cortex to Human Social Chemosensory Cues
Kathy Zhang, Wen Zhou, Denise Chen. Rice University, Houston, TX, United States
26 #P26  
Toxoplasma gondii infects olfactory structures in the mouse: a possible mechanism for host manipulation by influencing olfactory function
Ann E. Jorgensen¹, Corrie N. Hiltbrand², Gustavo Arrizabalaga ³, Mark D. Lavine³, Kevin R. Kelliher¹.  
¹Dept. Biological Science, University of Idaho, Moscow, ID, United States, ²Dept. Biological Sciences, Brigham Young University Idaho, Rexburg, ID, United States, ³Dept. Microbiology, Molecular Biology and Biochemistry, University of Idaho, Moscow, ID, United States

27 #P27  
Sexual dimorphism in olfactory bulb structure
Willi Bennegger¹, Elke Weiler². ¹Maria-von-Linden-Schule, Heckentalstraße 86 , D-89518 Heidenheim, Germany, ²Faculty of Medicine, Institute of Physiology, Department of Neurophysiology, Ruhr-University, D-44780 Bochum, Germany

28 #P28  
Heterogeneous Sensory Innervation of Individual Necklace Glomeruli
Renee E. Cockerham, Adam C. Puche, Steven D. Munger. Department of Anatomy and Neurobiology, University of Maryland School of Medicine, Baltimore, MD, United States

29 #P29  
Spatial analysis of olfactory bulb activity in the sea lamprey
Warren W Green¹, Sana Ahmed¹, Dominique Derjean², Réjean Dubuc², Barbara S Zielinski¹. ¹Department of Biological Sciences, University of Windsor, Windsor, ON, Canada, ²Centre de Recherche en Sciences Neurologiques, Département de physiologie, Université de Montréal, Montréal, QC, Canada

30 #P30  
Spatial Representations of Natural Odor Objects Across the Glomerular Layer of the Rat Olfactory Bulb
Brett A. Johnson, Joan Ong, Michael Leon. Dept. of Neurobiology & Behavior, UC Irvine, Irvine, CA, United States

31 #P31  
Analysis of responses to musk odorants in olfactory sensory neurons and in the main olfactory bulb
Mika Shirasu, Kazushige Touhara. Department of Integrated Biosciences, The University of Tokyo, Chiba, Japan
32  #P32  Input Driven Synchrony of Oscillating Olfactory Receptor Neurons: A Computational Modeling Study
Il Park¹, Yuriy V. Bobkov², Kirill Ukhanov², Barry W. Ache²,³, Jose C. Principe¹. ¹Department of Biomedical Engineering, University of Florida, Gainesville, FL, United States, ²Whitney Laboratory, Center for Smell and Taste, and McKnight Brain Institute, University of Florida, Gainesville, FL, United States, ³Departments of Zoology and Neuroscience, Gainesville, FL, United States

33  #P33  Increase in Number of Androgen Receptor Immunoreactive Cells in the Medial Amygdala of Male Hamsters in Response to Chemosensory Input
Camille B Blake, Michael Meredith. Florida State University, Department of Biological Science, Program in Neuroscience, Tallahassee, FL, United States

34  #P34  Cytokine profiles in nasal lavage fluid of patients with chronic rhinosinusitis
M. Hakan Ozdener¹, Karen K Yee¹, Beverly J Cowart¹, Aldona A Vainius¹, Pu Feng¹, Nancy E Rawson¹,². ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²WellGen, Inc, North Brunswick, 08902, NJ, United States

35  #P35  Voltage-sensitive dye imaging of odor evoked activity patterns in the trigeminal ganglion in vivo
Markus Rothermel¹,², Benedict Ng², Hanns Hatt¹,², Dirk Jancke². ¹Lehrstuhl für Zellphysiologie, Ruhr-Universität, Bochum, Germany, ²Lehrstuhl Allgemeine Zoologie und Neurobiologie, Kognitive Neurobiologie, Bernstein Group for Computational Neuroscience, Ruhr-Universität, Bochum, Germany, ³Graduiertenkolleg GRK736 “Development and Plasticity of the Nervous System: Molecular, synaptic and cellular mechanisms”, Bochum, Germany

36  #P36  Microglial response in the nucleus of the solitary tract after chorda tympani nerve injury
Dianna L Bartel, Thomas E Finger. Rocky Mt Taste & Smell Ctr, Neurosci Prog, Univ Colo Denver Med Sch, Aurora, CO, United States
37  #P37  Convergent Innervation Patterns of the Chorda Tympani and Glossopharyngeal Nerves onto Nucleus of the Solitary Tract Projection Neurons
James A. Corson, Alev Erisir. University of Virginia, Charlottesville, VA, United States

38  #P38  Synaptic Profile of Amygdala Terminals in Rodent Brainstem Gustatory Nuclei
Lydia N. Kullman, Robert F. Lundy. Anatomical Sciences and Neurobiology, School of Medicine, University of Louisville, Louisville, KY, United States

39  #P39  Activation of the dorsal motor nucleus of the vagus nerve modulates taste responses of the neurons in the parabrachial nuclei
Cheng-Shu Li. 1, Carbondale, IL, United States

40  #P40  Taste Responsive Multipolar And Elongated Neurons In Hamster Nucleus Of The Solitary Tract (NST) Project Differentially To Targets In The Brainstem: An In-Vivo Intracellular Recording, Labeling, And Tracing Study
Cheng-Xiang Li 1, QiuHong Yang 1, Cheng-Shu Li 1, David V. Smith 1, Robert S. Waters 1. 1University of Tennessee Health Science Center, Memphis, TN, United States, 2Southern Illinois University, Carbondale, IL, United States

41  #P41  Analysis Of Spike Train Variability In Chemosensory Neurons Within The Rat Geniculate Ganglion
Alexandre A Nikonov 1, Vernon Lawhern 2, Robert J Contreras 1. 1Department of Psychology and Program in Neuroscience, FSU, Tallahassee, FL, United States, 2Department of Statistics, FSU, Tallahassee, FL, United States

42  #P42  Neuron Survival and Central Terminal Field Persistence Despite Limited Peripheral Regeneration of the Injured Chorda Tympani Nerve in Adult Rats
Rebecca Reddaway, David L. Hill. University of Virginia, Charlottesville, VA, United States
A Network Model of Taste Processing in the Nucleus of the Solitary Tract
A.M. Rosen¹, H. Sichtig², J.D. Schaffer², P.M. Di Lorenzo¹.
¹Dept. of Psychology, Binghamton University, Binghamton, NY, United States, ²Dept. of Bioengineering, Binghamton University, Binghamton, NY, United States, ³Philips Research, North Am., Briarcliff Manor, NY, United States

Linoleic acid does not enhance chorda tympani nerve responses to sucrose, citric acid and quinine hydrochloride
Jennifer M Stratford, Robert J Contreras. Florida State University Department of Psychology and Program in Neuroscience, Tallahassee, FL, United States

Improvement of olfactory function in patients treated for chronic rhinosinusitis is related to increasing olfactory bulb volume
Volker Gudziol, Dorothee Buschhüter. Smell and Taste centre, Dresden, Germany

Terminal Field Organization of the Chorda Tympani, Greater Superficial Petrosal, and Glossopharyngeal Nerves in Nucleus of the Solitary Tract in C57BL/6J Mice
Chengsan Sun, David Hill. University of Virginia, Charlottesville, VA, United States

Characteristics of convergent synaptic activity between the caudal brainstem gustatory nucleus and neurons in the chorda tympani terminal field projecting to the parabrachial nucleus
Takeshi Suwabe, Robert M. Bradley. Department of Biologic and Materials Sciences, School of Dentistry, University of Michigan, Ann Arbor, MI, United States

A Murine Model for Induced Allergic Rhinitis
Virginia McM. Carr, Alan M. Robinson, Robert C. Kern. Dept. of Otolaryngology, Feinberg School of Medicine, Northwestern University, Chicago, IL, United States
Objective evaluation of the impact of chronic rhinosinusitis (CRS) on olfactory function
Kai Zhao1,2, Edmund A. Pribitkin1,2, Nancy E. Rawson1,3, David Rosen2, Christopher T. Klock1, Aldona A. Vainius1, Pamela Dalton1, Beverly J. Cowart1,2. 1Monell Chemical Senses Center, Philadelphia, PA, United States, 2Otolaryngology, Head & Neck Surgery, Thomas Jefferson University, Philadelphia, PA, United States, 3WellGen, Inc., North Brunswick, NJ, United States

Palinosmia: Olfactory Perseveration
Alan R Hirsch. Smell & Taste Treatment and Research Foundation, Chicago, IL, United States

Bimodal odorant perception in anosmic subject: a fMRI study
Emilia Iannilli1, Thomas Bitter2, Hilmar Gudziol2, Hartmut Burmeister3, Anita Chopra4. 1Dept. of ORL, University of Dresden Medical School, Dresden, Germany, 2Dept. of ORL, University of Jena, Jena, Germany, 3Dept. of Radiology, University of Jena, Jena, Germany, 4Unilever R&D Port Sunlight, Birmingham, United Kingdom
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>7:00</td>
<td>#16</td>
<td>Functional Architecture of Inhibition in the Olfactory Bulb: Glomeruli and Beyond</td>
<td>Michael T Shipley. <em>Department of Anatomy &amp; Neurobiology, Program in Neuroscience University of Maryland School of Medicine, Baltimore, MD, United States</em></td>
</tr>
<tr>
<td>7:25</td>
<td>#17</td>
<td>Olfactory systems theory</td>
<td>Thomas A. Cleland¹, Christiane Linster². ¹Dept. Psychology, Cornell University, Ithaca, NY, United States, ²Dept. Neurobiology &amp; Behavior, Cornell University, Ithaca, NY, United States</td>
</tr>
<tr>
<td>7:50</td>
<td>#18</td>
<td>Oscillatory Modes and the Role of Task Structure in Early Olfactory Processing</td>
<td>Leslie M. Kay. <em>Department of Psychology and Institute for Mind &amp; Biology, The University of Chicago, Chicago, IL, United States</em></td>
</tr>
<tr>
<td>8:15</td>
<td>#19</td>
<td>Rostral Olfactory Cortex</td>
<td>Kurt R. Illig. <em>University of Virginia, Charlottesville, VA, United States</em></td>
</tr>
<tr>
<td>8:40</td>
<td>#20</td>
<td>Olfaction in the wider world: The cortex and beyond</td>
<td>Joel Price. <em>Washington University at St. Louis</em></td>
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7:00 - 11:00 pm  
**POSTER SESSION II: CHEMOSENSORY RESPONSE TO, AND CONTROL OF FEEDING/NEUROETHOLOGY**

*North Ballroom*

1  
#P52  
The Nutritional Significance of Oral Starch Digestion  
Abigail L. Mandel, Kimberly L. Plank, Paul A.S. Breslin.  
*Monell Chemical Senses Center, Philadelphia, PA, United States*

2  
#P53  
Characterization of Off-odor development in human milk during storage at -18°C  
Johanna Spitzer¹, Andrea Buettner¹². ¹Institute of Pharmacy and Food Chemistry, Department Food Chemistry, University Erlangen-Nürnberg, 91052 Erlangen, Germany, ²Fraunhofer Institute for Process Engineering and Packaging (IVV), Giggenhauser Str. 35, D-85354 Freising, Germany

3  
#P54  
Chronic otitis media is associated with a marker of taste damage and higher weight status in children  
Alison K. Ventura, Danielle R. Reed, Julie A. Mennella.  
*Monell Chemical Senses Center, Philadelphia, PA, United States*

4  
#P55  
Food Liking, Ear Infections and Body Mass Index Among Preschoolers  
Kerah Kennedy¹, Heather L. Harrington¹, Stephanie Scarmo², Valerie B. Duffy¹. ¹Allied Health Sciences, Univ of CT, Storrs, CT, United States, ²Public Health, Yale Univ, New Haven, CT, United States

5  
#P56  
Odor Intensity, Diet and Nutrition-Related Health Indices Among Females  
Katryna R. Minski, Valerie B. Duffy. Allied Health Sciences, Univ of CT, Storrs, CT, United States

6  
#P57  
Taste loss, retronasal olfaction loss and reduced food liking  
Jennifer J. Stamps, Linda M. Bartoshuk, Derek J. Snyder.  
*University of Florida Center for Smell and Taste, Gainesville, FL, United States*
Bitesize is affected by Food Aroma presented at Sub- or Peri Threshold Concentrations  
Rene A de Wijk\textsuperscript{1}, Ilse A. Polet\textsuperscript{1,2}, Johannes HF Bult\textsuperscript{2,3}.  
\textsuperscript{1}AFSG/CICS, Wageningen, Netherlands,  
\textsuperscript{2}TIFN, Wageningen, Netherlands,  
\textsuperscript{3}NIZO Food Research, Wageningen, Netherlands

Similarities in Food Cravings and Mood States between Obese Women and Women who Smoke Tobacco  
Susana Finkbeiner\textsuperscript{1}, M. Yanina Pepino\textsuperscript{1,2}, Julie A. Mennella\textsuperscript{1}.  
\textsuperscript{1}Monell Chemical Senses Center, Philadelphia, PA, United States,  
\textsuperscript{2}Washington University, School of Medicine, St. Louis, MO, United States

PROP Sensitivity and Dietary Intake of Antioxidant-Rich Foods  
Yvonne Koelliker\textsuperscript{1}, Beverly J. Tepper\textsuperscript{1}, James E. Simon\textsuperscript{2}, John R. Burgess\textsuperscript{3}.  
\textsuperscript{1}Dept. of Food Science, Rutgers University, New Brunswick, NJ, United States,  
\textsuperscript{2}Plant Biology and Pathology, Rutgers University, New Brunswick, NJ, United States,  
\textsuperscript{3}Dept. of Foods and Nutrition, Purdue University, West Lafayette, IN, United States

Association of a TAS2R38 Polymorphism and the Eating Behavior Disinhibition in a Female Amish Cohort  
Cedrick D. Dotson\textsuperscript{1}, Hillary Shaw\textsuperscript{2}, Steven D. Munger\textsuperscript{1}, Nanette I. Steinle\textsuperscript{2}.  
\textsuperscript{1}Department of Anatomy & Neurobiology, University of Maryland School of Medicine, Baltimore, MD, United States,  
\textsuperscript{2}Department of Medicine, Division of Endocrinology, Diabetes and Nutrition, University of Maryland School of Medicine, Baltimore, MD, United States

Modulation of sweet taste sensitivity by glucagon signaling in taste buds  
Amanda E.T. Elson\textsuperscript{1}, Cedrick D. Dotson\textsuperscript{1}, Josephine M. Egan\textsuperscript{2}, Steven D. Munger\textsuperscript{1}.  
\textsuperscript{1}Department of Anatomy and Neurobiology, University of Maryland School of Medicine, Baltimore, MD, United States,  
\textsuperscript{2}National Institute on Aging/NIH, Baltimore, MD, United States
12 #P63 Sweet receptor gene (Tas1r2) structure and preference for sweet stimuli in species of Carnivora
Joseph G. Brand1,3, Dieter Glaser2, Weihua Li1, Gary K. Beauchamp1,4, Xia Li1. 1Monell Chemical Senses Center, Philadelphia, PA, United States, 2Anthropological Institute and Museum, University of Zürich, Zürich, Switzerland, 3Department of Biochemistry, School of Dental Medicine, University of Pennsylvania, Philadelphia, PA, United States, 4Department of Psychology, School of Arts and Sciences and Department of Anatomy, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA, United States

13 #P64 GABA-A Receptor Activation Influences Consumption of Appetitive and Aversive Tastants
David W. Pittman1, Molly McGinnis1, Elizabeth Miller1, Lindsey Richardson1, John-Paul Baird2. 1Department of Psychology, Wofford College, Spartanburg, SC, United States, 2Department of Psychology, Amherst College, Amherst, MA, United States

14 #P65 Conditioned preferences for glucose and fructose in T1R3 KO and TRPM5 KO mice
Steven Zukerman1, Robert F. Margolskee2, Anthony Sclafani1. 1Brooklyn College of CUNY, Brooklyn, NY, United States, 2Mount Sinai School of Medicine, New York, NY, United States

15 #P66 Nutrient-specific preferences in trpm5 knockout mice
Xueying Ren1,2, Jozelia G Ferreira1,2,3, Jenny Tong4, Catherine W Yeckel1,5, Ivan E de Araujo1,2. 1The John B Pierce Laboratory / Yale University, New Haven, CT, United States, 2Department of Psychiatry, Yale University, New Haven, CT, United States, 3Institute of Biomedical Sciences, University of Sao Paulo, Sao Paulo, Brazil, 4Division of Endocrinology, Diabetes & Metabolism, University of Cincinnati, Cincinnati, OH, United States, 5Epidemiology & Public Health, Yale University, New Haven, CT, United States

16 #P67 Taste Receptor T1R3 is Involved in Detection of Ethanol Flavor in Mice
Vladimir O. Murovets1, Vasily A. Zolotarev1, Robert F. Margolskee2, Alexander A. Bachmanov3. 1Pavlov Institute of Physiology, Saint-Petersburg, Russia, 2Mount Sinai School of Medicine, New York, NY, United States, 3Monell Chemical Senses Center, Philadelphia, PA, United States
17 #P68 Effect of *kokumi* taste active peptides on amiloride-insensitive salt taste preference in C57BL/6J mice
MeeRa Rhyu1, Ah-Young Song1, Keiko Abe2, Vijay Lyall3.
1Food Function Research Division, Korea Food Research Institute, Seongnam-Si, South Korea, 2Department of Applied Biological Chemistry, The University of Tokyo, Tokyo, Japan, 3Physiology, Virginia Commonwealth University, Richmond, VA, United States

18 #P69 Responses of *Trpv1* Knockout Mice to Trigeminal Irritants in Two Different Behavioral Assays
CJ Saunders1, Winston Y Li2, Tulsi D Patel2, Bo-Shan Xiang2, Wayne L Silver2. 1University Colorado Denver-Anschutz Medical Campus, Denver, CO, United States, 2Wake Forest University, Winston-Salem, NC, United States

19 #P70 Sweet Stimuli Elicit Differential Responses in the Chorda Tympani Nerve of Obesity-resistant Rats Compared to Obesity-prone Rats
Kimberly R. Smith, David W. Pittman. Department of Psychology, Wofford College, Spartanburg, SC, United States

20 #P71 The Perceptual Consequences Of Salt Appetite In Rats
Steven J. St. John, Anya C. Marshall, Erin Krauskopf. Department of Psychology, Rollins College, Winter Park, FL, United States

21 #P72 Rat as a model for the study of multimodal integration of flavor
Shree H. Gautam, Justus V. Verhagen. The John B. Pierce Laboratory, New Haven, CT, United States

22 #P73 Mouse Strain Differences in Conditioned Taste Aversion Formation, Generalization and Extinction using a Self-administration Paradigm
April R. Glatt, Kenichi Tokita, John D. Boughter, Jr. University of Tennessee Health Science Center, Memphis, TN, United States

23 #P74 Beyond *Tas1r3*: Identification of other loci affecting consumption of sweet-tasting compounds
Natalia P. Bosak, Maria L. Theodorides, Cailu Lin, Zakiyyah Smith, Gary K. Beauchamp, Alexander A. Bachmanov. Monell Chemical Senses Center, Philadelphia, PA, United States
24  #P75  The Benzamil (Bz)-insensitive NaCl Chorda Tympani (CT) Taste Nerve Responses Demonstrate Increased Sensitivity to TRPV1t Modulators in Alcohol-preferring (P) Rats
Vijay Lyall, Tam-Hao T. Phan, Shobha Mummalaneni, Pamela Melone, Jamison Coleman, John A. DeSimone. Department of Physiology and Biophysics, Virginia Commonwealth University, Richmond, VA, United States

25  #P76  Central neural sensitivity to ethanol and other taste stimuli in selectively bred ethanol-preferring and ethanol-non-preferring rats
Christian H Lemon¹, Susan M Brasser².¹St. Louis University School of Medicine, Saint Louis, MO, United States, ²San Diego State University, San Diego, CA, United States

26  #P77  Integrative studies of the relationship between feeding condition and the rat olfactory bulb responses
Anan Li¹, Xiaoping Rao¹, Lihong Jiang², Kevin Bahr², Gordon M. Shepherd², Fuqiang Xu¹.¹The State Key Laboratory of Spectroscopy, Atomic and Molecular Physics, WIPM, Wuhan, China, ²Yale Medical School, New Haven, CT, United States

27  #P78  Resistance to Obesity Following Kv1.3-gene Targeted Deletion is Inhibited by Olfactory Bulbectomy
Kristal R Tucker¹, Melissa A Cavallin¹, J Michael Overton², Debra A Fadool¹.¹Florida State University, Department of Biological Sciences, Program in Neuroscience, Tallahassee, FL, United States, ²Florida State University, College of Medicine, Department of Biomedical Sciences, Tallahassee, FL, United States

28  #P79  Experimental anosmia abolishes avoidance of ethanol solutions in 129P3/J mice
Vasiliy A. Zolotarev¹, Anastasia O. Shabolina¹, Vladimir O. Murovets¹, Alexander A. Bachmanov².¹Pavlov Institute of Physiology, Saint-Petersburg, Russia, ²Monell Chemical Senses Center, Philadelphia, PA, United States
Maillard Reacted Peptides (MRPs) Modulate Benzamil (Bz)-insensitive NaCl Chorda Tympani (CT) Taste Nerve Responses and Blood Pressure (BP) in Dahl Salt-sensitive Rats

Shyama Masilamani¹, Jamison Coleman², Pamela Melone², Shobha Mummalaneni², Tadayoshi Katsumata³, John A DeSimone², Vijay Lyall². ¹Department of Medicine Division of Nephrology VCU, Richmond, VA, United States, ²Department of Division of Physiology and Biophysics VCU, Richmond, VA, United States, ³Kyowa hakko Food Sp. Co. LTD, Ibaraki, Japan

Regulation of release of endogenous opioids from duodenal brush cells requires Trpm5

Zaza Kokrashvili, Robert F Margolskee, Bedrich Mosinger. Department of Neuroscience, Mount Sinai School of Medicine, New York, NY, United States

Differential Effects of GLP-1 Agonist on Brief- and Long-Access Sucrose Preferences in Lean and High Fat Diet-Induced Obese Rats

Andras Hajnal¹², Derek M. Culnan², Robert N. Cooney². ¹Dept. of Neural & Behavioral Sciences, Penn State University, College of Medicine, Hershey, PA, United States, ²Dept. of Surgery, Penn State University, College of Medicine, Hershey, PA, United States

State-dependent Yeast Intake in Drosophila melanogaster

Osama Ahmed, Beth Gordesky-Gold, Paul A. S. Breslin. Monell Chemical Senses Center, Philadelphia, PA, United States

A Behavioral Assay using Drosophila to Test for Chemesthetic Irritants Activating TRPA1 Channels

Wayne L. Silver, Matthew W. Greene, Paige M. Roe, Erik C. Johnson. Wake Forest University, Winston-Salem, NC, United States

Intake of Fructose and Sucrose Solutions as a Function of Concentration

Jennifer A. Cassell, James C. Smith, Thomas A. Houpt. Program in Neuroscience, The Florida State University, Tallahassee, FL, United States
Antennular Waving in Spiny Lobsters is Enhanced by Odorants: A 3D Kinematic Analysis
Peter C. Daniel, Calvin Carter. Hofstra University, Hempstead, NY, United States

The effect of sniffing frequency on odor behavior
Keiichi Tonosaki. Meikai Univ, Sakatoshi, Japan

Detailed Analysis of the Effects of Periodic Input on Behavioral Measures of Odor Detection in the Moth Manduca sexta
Mandy N. Hatfield, Faizan R. Kalwar, Kevin C. Daly. West Virginia University, Morgantown, WV, United States

Periodic Odor Stimulation Affects Antennal Input, Antennal Lobe Processing, and Behavioral Measures of Perception in the Moth Manduca sexta
Kevin C. Daly¹, Shreejoy Tripathy², Erich M. Staudacher¹, Oakland J. Peters¹, Mandy N. Hatfield¹, Faizan R. Kalwar¹. ¹West Virginia University, Morgantown, WV, United States, ²Carnegie Mellon University, Pittsburgh, PA, United States

Attraction of Female Round Gobies to Steroids Released by Males
Matthew R. Kereliuk¹, Yogesh Katare¹, Keith Tierney¹, Alyson Laframboise¹, Alexander P. Scott², Barbara S. Zielinski¹. ¹Department of Biological Sciences, University of Windsor, Windsor, ON, Canada, ²Weymouth Laboratory, The Centre for Environment, Fisheries and Aquaculture Science, Weymouth, United Kingdom

Androstenone May Show Pheromonal Activity in Mice
Vera V. Voznessenskaya, Maria A. Klyuchnikova. A.N. Severtzov Institute of Ecology & Evolution, Moscow, Russia

The induction of pregnancy block in mice by saliva via the vomeronasal organ
Roger N Thompson, Murtada Taha, Audrey Napier, Kennedy s Wekesa. Alabama State University, Montgomery, AL, United States
Sea hares chemically defend themselves from predatory blue crabs and bluehead wrasse using light-harvesting molecules in their algal diet
Michiya Kamio, Linh Nguyen, Tiphani V. Grimes, Matthew Nusbaum, Melissa H. Hutchins, Seyma Yaldiz, Robyn van Dam, Charles D. Derby. Neuroscience Institute and Department of Biology, Georgia State University, Atlanta, GA, United States

Role of Octopamine in Moth Olfaction
Kirk Hillier. Acadia University, Wolfville, NS, Canada

Flavor Identification and Memory in Children
Melinda S Brearton, Brittany Carlisle, Katheryn Pointer, Erica Mannea, Konstantin Rybalsky, Robert A Frank. University of Cincinnati, Cincinnati, OH, United States

Millisecond Photoactivation of Bombykol Receptor Neurons Expressing Channelrhodopsin-2 Triggers Pheromone Searching Behavior in Male Silkmoths
Masashi Tabuchi1,2, Takeshi Sakurai1, Hidefumi Mitsuno1, Ryo Minegishi1, Shuichi S. Haupt1, Takahiro Shiotsuki1, Keiro Uchino1, Hideki Sezutsu1, Toshiki Tamura1, Kei Nakatani2, Ryohei Kanzaki1. 1Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan, 2Graduate School of Life and Environmental Sciences, University of Tsukuba, Tsukuba, Japan, 3National Institute of Agrobiological Sciences, Tsukuba, Japan

Olfactory Thresholds of Elasmobranchs
Tricia L Meredith, Stephen M Kajiura. Florida Atlantic University, Boca Raton, FL, United States

Cycloheximide: an effective taste aversion UCS
Bradley K Formaker, Kumudini Chintalapati, Thomas P Hettinger, Marion E Frank. University of Connecticut Health Center, Farmington, CT, United States

Enantioselective Odorant Receptor in the Yellow Fever Mosquito, Aedes aegypti
Jonathan D. Bohbot, Joseph C. Dickens. USDA, ARS, BARC, PSI, IIBBL, Beltsville, MD, United States
49 #P100 Relationships between Early Dietary Experiences and Acceptance of the Basic Tastes during Infancy
Catherine A. Forestell¹², Gary K. Beauchamp¹, Julie A. Mennella¹. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²The College of William & Mary, Williamsburg, VA, United States

50 #P101 How do taste and nutritional feedback from the gut interact to determine daily sugar intake?
John I Glendinning, Frans Beltran, Sabrina Cheng, Jade Gieseke, Heather N Spain. Barnard College, Columbia University, New York, NY, United States

51 #P102 Intensity of 6-n-propylthiouracil (PROP) Taste, Food Preferences, and Obesity: The Beaver Dam Offspring Study
Karen J Cruickshanks¹, Carla R Schubert¹, Derek J Snyder²³, Linda M Bartoshuk², Guan-Hua Huang⁴, Barbara EK Klein¹, Ronald Klein¹, Elizabeth M Krantz¹. ¹University of Wisconsin School of Medicine and Public Health, Madison, WI, United States, ²University of Florida, Gainesville, FL, United States, ³Yale University, New Haven, CT, United States, ⁴National Chiao Tung University, Hsinchu, Taiwan

52 #P103 Perception of Threshold and Suprathreshold Taste Stimuli in Obese and Normal-Weight Women
M. Yanina Pepino¹², Susana Finkbeiner¹, Gary K. Beauchamp¹, Julie A. Mennella¹. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Washington University in St. Louis, School of Medicine, St. Louis, MO, United States

53 #P111 Group III metabotropic glutamate receptors modulate transmission of taste information in primary taste afferents
Robert M Hallock. University of Colorado School of Medicine, Aurora, CO, United States
Friday, April 24, 2009

7:30 am - 1:00 pm
6:30 pm - 7:30 pm  REGISTRATION
    Prefunction Area

7:30 - 9:00 am  CONTINENTAL BREAKFAST

8:00 - 10:30 am  SYMPOSIUM
    DEVELOPMENT AND PLASTICITY:
    FIRST CENTRAL CHEMOSENSORY RELAYS
    Chair/Organizer: Charlotte Mistretta and David Hill
    South Ballroom

    #21 Development and Plasticity: First Central
    Chemosensory Relays
    Charlotte M. Mistretta¹, David L. Hill². ¹University of
    Michigan, Ann Arbor, MI, United States, ²University of
    Virginia, Charlottesville, VA, United States

8:00  #22 Mechanisms to establish functional groups of neurons:
    Lessons from chick neurogenesis
    Catherine Krull. University of Michigan

8:25  #23 Roles for glia in regulating formation of neuronal groups
    in moth olfactory lobe
    Lynne Oland. University of Arizona

8:50  #24 Long life expansion of olfactory brain in spiny lobster by
    neurogenesis
    Manfred Schmidt. Georgia State University

9:15  #25 Establishing the rat taste nucleus of solitary tract (NST)
    Robert Bradley. University of Michigan

9:40  #26 Development and plasticity of neuron and synapse
    morphology in rat rostral NST
    Alev Erisir. University of Virginia

10:05 #27 Plasticity in synaptic function following altered
    chemosensory input to caudal NST
    Diana Kunze. Case Western Reserve University
10:30 - 11:00 am  BREAK
Prefunction Area

11:00 am - 12:30 pm  PLATFORM PRESENTATIONS
POLAK YOUNG INVESTIGATOR AWARD WINNERS
South Ballroom

An additional Polak Young Investigator Award Winner, Wen Li, will speak in the symposium on Saturday evening.

11:00  #28  Nucleotide-mediated signaling in the olfactory epithelium
Ivan Manzini\textsuperscript{1,2}, Thomas Hassenklöver\textsuperscript{1,2}, Silvia Kurtanska\textsuperscript{1}, Stephan Junek\textsuperscript{1}, Ilonka Bartoszek\textsuperscript{1}, Detlev Schild\textsuperscript{1,2}. \textsuperscript{1}University of Göttingen, Göttingen, Germany, \textsuperscript{2}DFG Research Center for Molecular Physiology of the Brain (CMPB), Göttingen, Germany

11:15  #29  Hyperpolarization-Activated Cyclic Nucleotide-gated Channels in Olfactory Sensory Neurons Mediate Axon Targeting and Glomerular Formation
Arie S Mobley\textsuperscript{1,2}, Alexandra M Miller\textsuperscript{1,3}, Lydia Maurer\textsuperscript{1}, Charles A Greer\textsuperscript{1,2,3}. \textsuperscript{1}Department of Neurosurgery, New Haven, CT, United States, \textsuperscript{2}Department of Neurobiology, New Haven, CT, United States, \textsuperscript{3}Interdepartmental Neuroscience Program, New Haven, CT, United States

11:30  #30  Virus infection increases mouse pheromone production
Koichi Matsumura\textsuperscript{1}, Maryanne Opiekun\textsuperscript{1}, Kenji Mori\textsuperscript{2}, Takuya Tashiro\textsuperscript{2}, Hiroaki Oka\textsuperscript{3}, Kunio Yamazaki\textsuperscript{1}, Gary Beauchamp\textsuperscript{1}. \textsuperscript{1}Monell Chemical Senses Center, Philadelphia, PA, United States, \textsuperscript{2}RIKEN Research Center for Allergy and Immunology, Kanagawa, Japan, \textsuperscript{3}Panasonic Corporation, Kyoto, Japan

11:45  #31  Increased inhibition in the olfactory bulb due to newborn neurons allows perceptual learning
Nathalie Mandaieron\textsuperscript{1}, Melissa Moreno\textsuperscript{1}, Christiane Linstern\textsuperscript{2}, Olga Escaniella\textsuperscript{2}, Joelle Sacquet\textsuperscript{1}, Anne Didier\textsuperscript{1}. \textsuperscript{1}UMR CNRS 5020 Lyon1, Lyon, France, \textsuperscript{2}Cornell University, Ithaca, NY, United States

12:00  #32  Opioid modulation of taste encoding in the amygdala
Sharif A Taha\textsuperscript{1,2}, Howard L Fields\textsuperscript{2}. \textsuperscript{1}University of Utah School of Medicine, Salt Lake City, UT, United States, \textsuperscript{2}Gallo Research Center, UCSF, Emeryville, CA, United States
12:15    #33  Taste cortex contributes to odor quality coding
Maria G Veldhuizen¹,², Danielle J Nachtigal¹, Dana M Small¹,²,³.
¹The John B Pierce Laboratory, New Haven, CT, United States, ²Department of Psychiatry, New Haven, CT, United States, ³Department of Psychology, New Haven, CT, United States

12:45 - 2:45 pm  AChemS BUSINESS MEETING
South Ballroom

3:00 - 4:00 pm  NIH WORKSHOP: EVERYTHING YOU WANTED
TO KNOW ABOUT CHANGE IN NIH PEER REVIEW,
BUT WERE AFRAID TO ASK
Chair/Organizer: NIDCD Scientific Review Branch
Florida Room

5:00 - 7:00 pm  CHEMA SOCIAL
(AChemS members only; RSVP required)
Chair/Organizer: Suzanne Sollars
Tropics Room

Join us for this social event! AChemS members who have
achieved an advanced degree (Ph.D., M.D., D.V.M., D.D.S.,
terminal Master’s, etc.) within the past 10 years are
automatically members of the ChEMA (Chemosensory
Enterprise and Mentorship Alliance) subgroup. The social is
open to all AChemS members and is designed for junior and
senior AChemS members to get to know each other, network,
and talk about issues important to junior chemosensory
scientists.
8:00 am - 12:30 pm  
**POSTER SESSION III: CORTICAL CHEMOSENSORY PROCESSING/RECEPTOR GENOMICS AND MOLECULAR BIOLOGY**  
South Ballroom

1  
#P104  
**Odor Quality Coding and Categorization in Human Posterior Piriform Cortex**  
James D. Howard¹, Jane Plailly⁴, Marcus Grueschow⁴, John-Dylan Haynes⁵,⁶, Jay A. Gottfried¹,²,³. ¹Cognitive Neurology & Alzheimer’s Disease Center, Chicago, IL, United States, ²Department of Neurology, Northwestern University Feinberg School of Medicine, Chicago, IL, United States, ³Department of Psychology, Northwestern University Weinberg College of Arts and Sciences, Chicago, IL, United States, ⁴Laboratoire de Neurosciences et Systèmes Sensoriels, Université Claude-Bernard Lyon, Lyon, France, ⁵Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ⁶Bernstein Center for Computational Neuroscience, Charité - Universitätsmedizin, Berlin, Germany

2  
#P105  
**Anterior Olfactory Nucleus: A Golgi Study of Dendritic Morphology**  
Peter C. Brunjes, Michael Kenerson. University of Virginia, Charlottesville, VA, United States

3  
#P106  
**Detecting the taste-specific temporal type by fMRI - salty and sweet**  
Yuko Nakamura¹, Tazuko K Goto¹, Kenji Tokumori¹, Takashi Yoshiura¹, Koji Kobayashi², Yasuhiko Nakamura², Hiroshi Honda¹, Yuzo Ninomiya¹, Kazunori Yoshiura¹. ¹Kyushu University, Fukuoka, Japan, ²Kyushu University Hospital, Fukuoka, Japan

4  
#P107  
**Low bulbar NE concentration modulates odor detection whereas higher concentrations modulate discrimination**  
Olga D Escanilla¹, Matthew Ennis², Christiane Linster¹. ¹Neurobiology and Behavior, Cornell University, Ithaca, NY, United States, ²Anatomy and Neurobiology, University of Tennessee Health Science, Memphis, TN, United States

5  
#P108  
**The effect of unilateral naris occlusion on gene expression in the mouse olfactory mucosa and bulb**  
David M. Coppola¹, Yan Zhang², Oswald R. Crasta². ¹Randolph Macon College, Ashland, VA, United States, ²Bioinformatics Institute, Blacksburg, VA, United States
6 #P109  Anterior olfactory nucleus projections target the olfactory bulb
Kurt R. Illig. University of Virginia, Charlottesville, VA, United States

7 #P110  Activation likelihood estimation (ALE) meta-analysis of human functional brain imaging data following trigeminal stimulation of the nasal mucosa with carbon dioxide (CO₂)
Jessica Albrecht¹, Rainer Kopietz², Martin Wiesmann²,³, Thomas Hummel⁴, Johan N. Lundstrom¹,⁵. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Department of Neuroradiology, Ludwig-Maximilians-University, Munich, Germany, ³Department of Radiology and Neuroradiology, Helios Kliniken, Schwerin, Germany, ⁴Department of Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany, ⁵Department of Psychology, University of Pennsylvania, Philadelphia, PA, United States

9 #P112  Subnuclear organization of parabrachial taste neurons projecting to reward-related forebrain structures in C57BL/6J mice
Kenichi Tokita, John D. Boughter. University of Tennessee Health Science Center, Memphis, TN, United States

10 #P113  Cloning and Localization of Four Putative Serotonin Receptors in the Primary Olfactory Pathway of the Moth Manduca sexta
Wujie Zhang¹, Mike A. Miller¹, Akshay Muralidhar¹, Joel B. Dacks², Andrew M. Dacks¹, Alan J. Nighorn¹. ¹Arizona Research Laboratories, Division of Neurobiology, University of Arizona, Tucson, AZ, United States, ²Department of Cell Biology, University of Alberta, Edmonton, AB, Canada

11 #P114  OR37 - receptors: a unique subfamily of olfactory receptors
Heinz Breer, Hoppe Rainer, Zhang Yongquan, Strotmann Jörg. University Hohenheim, Institute of Physiology, Stuttgart, Germany

12 #P115  Perceptual Decision-Making in the Human Olfactory Brain
Nicholas E. Bowman, James D. Howard, Konrad P Kording, Jay A. Gottfried. Northwestern University, Chicago, IL, United States
13 #P116 A novel chemical-informatics method to decode odor receptor chemical space
Sean M Boyle1, Anandasankar Ray2. 1IGERT, GGB, University of California, Riverside, CA, United States, 2Entomology Department, University of California, Riverside, CA, United States

14 #P117 Correlation between olfactory function and volume of hippocampus/amygdala
Stefan Puschmann1, Dorothee Buschhüter1, Martin Smitka2, Johannes Gerber1, Nancy Honeycutt1. 1Otorhinolaryngology, Dresden, Germany, 2Paediatrics, Dresden, Germany, 3Neuroradiology, Dresden, Germany, 4Department of Psychiatry and Behavioral Sciences, Johns Hopkins University, Baltimore, MD, United States

15 #P118 Characterizing Olfactory Sub-genome through Custom Microarrays
Xiaohong Zhang, Florencia Marcucci, Dongjing Zou, Stuart Firestein. Dept. of Bio. Sci. Columbia University, New York, NY, United States

16 #P119 Next Generation Sequencing as a Tool for Comprehensive Variation Analyses of Human Olfactory Receptor Genes
Yehudit Hasin1, Tsviya O lender1, Miriam K hen1, Ifat K eydar1, Hans Leh rach2, Marcus A lbrecht2, Bernd T immerman3, Daniel Re ed3, Charles J. Wysocki3, Jan K orbel4, Doron L antic4. 1Dept. Molecular Genetics, Weizmann Institute of Science, Rehovot, Israel, 2Dept. Vertebrate Genomics, Max Planck Institute for Molecular Genetics, Berlin, Germany, 3Monell Chemical Senses Center, Philadelphia, PA, United States, 4Gene Expression Unit, European Molecular Biology Laboratory, Heidelberg, Germany

17 #P120 OR5D3P, a pseudogene with a functional activity potential
Alex Veithen, Magali Philippeau, Françoise Wilkin, Pierre Chatelain. TecnoScent S.A., Brussels, Belgium

18 #P121 Identification and characterisation of a carboxylic acid-responding human OR
Magali Philippeau, Alex Veithen, Françoise Wilkin, Pierre Chatelain. TecnoScent S.A., Brussels, Belgium
High incidence of charged amino acids in the third extracellular loop of olfactory receptors: Linking receptor structure to olfactory perception

Hadas Lapid\textsuperscript{1,3}, Rehan Khan\textsuperscript{1}, Tsviya O lender\textsuperscript{2}, David Harel\textsuperscript{3}, Ron Naaman\textsuperscript{4}, Doron Lancet\textsuperscript{2}, Noam Sobel\textsuperscript{1}. \textsuperscript{1}Department of Neurobiology, Weizmann Institute of Science, Rehovot, Israel, \textsuperscript{2}Department of Molecular Genetics, Weizmann Institute of Science, Rehovot, Israel, \textsuperscript{3}Department of Computer Science and Applied Mathematics, Weizmann Institute of Science, Rehovot, Israel, \textsuperscript{4}Department of Chemical Physics, Weizmann Institute of Science, Rehovot, Israel

Plasticity in expression of chemoreceptor genes in \textit{Drosophila melanogaster}

Shanshan Zhou, Trudy F. C. Mackay, Robert R. H. Anholt. North Carolina State University, Raleigh, NC, United States

Role of Plasma Membrane Calcium ATPases in Mouse Olfactory Neurons

Samsudeen Ponissery Saidu, Megan S. Valentine, Rona J. Delay, Judith L. Van Houten. University of Vermont, Burlington, VT, United States

Expression of Canine b-Defensin (CBD103) and Olfactory Marker Protein (OMP) in the Canine Nasal Cavity

Edward E. Morrison\textsuperscript{1}, Shelly Aono\textsuperscript{1}, John C. Dennis\textsuperscript{1}, Jishu Shi\textsuperscript{2}. \textsuperscript{1}Auburn University, Auburn, AL, United States, \textsuperscript{2}Auburn University, Auburn, AK, United States

Experience-Dependent Modulation of Odor Mixture Coding and Perception

Keng Nei Wu, James D Howard, Jay A Gottfried. Cognitive Neurology & Alzheimer’s Disease Center, Northwestern University, Chicago, IL, United States
Endothelin modulates both short-term kinetics of odorant detection and long-term cellular population dynamics in olfactory mucosa
Nicolas Meunier1,2,3, Elodie Goudon1,2, Didier Durieux1,2, Denise Grebert1,2, Christine Baly1,2, Martine Sautel1,2,3, Roland Salesse1,2, Monique Caillol1,2, Patrice Congar1,2.
1INRA, UMR1197 Neurobiologie de l’Olfaction et de la Prise Alimentaire, Récepteurs et Communication Chimique, Jouy en Josas, France, 2Université Paris-Sud, UMR1197, Orsay, France, 3Université de Versailles Saint-Quentin, Versailles, France

Neuroanatomical correlates of olfactory function
Johannes Frasnelli1,2, Johan N Lundstrom2,3, Julie A Boyle2, Jelena Djordjevic2, Robert J Zatorre2, Marilyn Jones-Gotman2. 1CHU Ste.-Justine, Montreal, QC, Canada, 2MNI, Montreal, QC, Canada, 3Monell Chemical Senses Center, Philadelphia, PA, United States

Mechanisms of constitutive and ATP-evoked release of ATP from neonatal mouse OE stores
Sebastien Hayoz, Colleen C Hegg. Department of Pharmacology and Toxicology, Michigan State University, East Lansing, MI, United States

CNGA2 heterozygous mice with a knockout TRPM5 show fewer glomeruli targeted by OSNs with nonfunctional CNGA2
David A. Dunston, Wangmei Luo, Weihong Lin. University of Maryland Baltimore County, Baltimore, MD, United States

Differences in Matrix Metalloproteinase-2 Expression Following Two Olfactory Injury Models
Steve R. Bakos1, James E. Schwob2, Richard M. Costanzo1. 1Virginia Commonwealth University School of Medicine, Richmond, VA, United States, 2Tufts University School of Medicine, Boston, MA, United States

Identification of Taste Bud-Associated Genes
Bryan D Moyer1, Peter Hevezi2, Na Gao1, Min Lu1, Fernando Echeverri1, Bianca Laita1, Dalia Kalabat1, Hortensia Soto1, Albert Zlotnik2, Mark Zoller1. 1Sensomyx, Inc., San Diego, CA, United States, 2University of California at Irvine, Irvine, CA, United States
30 #P133  Functional characterization of two fatty acid activated GPCRs expressed in the mammalian gustatory system
Han Xu¹, Jason Montez², Stephen Gravina², Mark Dewis², Tian Yu¹, Bhavik P. Shah¹, Timothy A. Gilbertson¹.
¹Department of Biology & The Center of Advanced Nutrition, Utah State University, Logan, UT, United States, ²International Flavors & Fragrances, Union Beach, NJ, United States

31 #P134  Genetic and Molecular Basis of Individual Differences in Human Umami Taste Perception
Noriatsu Shigemura¹, Shinya Shirosaki¹, Keisuke Sanematsu¹, Yoko Ogiwara¹², Misako Kawai¹³, Ryusuke Yoshida¹, Yuzo Ninomiya¹. ¹Sect Oral Neurosci, Grad Sch Dental Sci, Kyushu Univ, Fukuoka, Japan, ²External Scientific Affairs Dept, Ajinomoto Co. Inc., Tokyo, Japan, ³Inst Life Sci, Ajinomoto Co. Inc., Kawasaki, Japan

32 #P135  Genetic mutations and bitter taste sensitivity to four substances
Stephen Wooding¹, Natacha Roudnitzky², Claudia Batram², Jenny Stehr², Marcel Winnig², Christina Kuhn², Wolfgang Meyerhof². ¹University of Texas Southwestern Medical Center, Dallas, TX, United States, ²German Institute of Human Nutrition, Nutthetal, Germany

33 #P136  Identification of the Interaction site for Gymnemic acid at the sweet taste receptor T1R2+T1R3
Keisuke Sanematsu¹², Noriatsu Shigemura¹, Masafumi Jyohtaki¹, Seiji Nakamura¹, Toshiaki Imoto¹, Yuzo Ninomiya¹. ¹Section of Oral Neuroscience, Graduate School of Dental Science, Kyushu University, Fukuoka, Japan, ²Section of Oral and Maxillofacial Oncology, Graduate School of Dental Science, Kyushu University, Fukuoka, Japan, ³Division of Integrative Physiology, Department of Functional, Morphological and Regulatory Science, Tottori University, Yonago, Japan

34 #P137  The role of the visual cortex in olfactory processing: an rTMS study
Johan N. Lundstrom¹², Michael Waterston¹, Jahan Jadauji³, Christopher C. Pack³, Jelena Djordjevic³. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Department of Psychology, University of Pennsylvania, Philadelphia, PA, United States, ³Montreal Neurological Institute, McGill University, Montreal, QC, Canada
35  #P138  TAS1R1-intronic SNP Associations with Liking for Dietary Sources of Glutamate and for Orosensory Intensity  
Shristi Rawal¹, Margaret R. Wallace², John E. Hayes³, Linda M. Bartoshuk⁴, Taimour Y. Langae⁵, Andrew Sholudko¹, Valerie B. Duffy¹. ¹Allied Health Sciences, Univ of CT, Storrs, CT, United States, ²Molecular Genetics & Microbiology, Univ of FL, Gainesville, FL, United States, ³Ctr Alcohol & Addiction, Brown Univ, Providence, RI, United States, ⁴Dentistry, Univ of FL, Gainesville, FL, United States, ⁵Ctr Pharmacogenomics, Univ of FL, Gainseville, FL, United States

36  #P139  Key amino acid residues involved in multi-point binding interactions of sweet protein, brazzein, with the T1R2-T1R3 human sweet receptor  
Fariba Assadi-Porter¹, Emeline L Maillet², James Radek¹, John L Markley¹, Marianna Max². ¹University of Wisconsin, Madison, WI, United States, ²Mount Sinai School of Medicine, New York, NY, United States

37  #P140  Orbitofrontal lesions and hypersensitivity to olfactory stimuli  
Julie A. Boyle, Marilyn Jones-Gotman.  Montreal Neurological Institute, McGill University, Montreal, QC, Canada

38  #P141  Structural requirements for bitter taste receptor activation  
Maik Behrens¹, Anne Brockhoff¹, Giovanni Appendino², Wolfgang Meyerhof¹. ¹Dept. Molecular Genetics, German Institute of Human Nutrition Potsdam-Rehbruecke, Nuthetal, Germany, ²Dipartimento di Scienze Chimiche, Università del Piemonte, Orientale, Alimentari, Farmaceutiche e Farmacologiche, Novara, Italy

39  #P142  Immunohistochemical Analysis of Human Fungiform Papillae  
Luba Dankulich-Nagrudny¹, Nancy Rawson¹², Frank Kim¹, Paul A. S. Breslin¹. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²WellGen, New Brunswick, NJ, United States
40 #P143  Subtypes of T Lymphocytes in Healthy Human Fungiform Papillae
Pu Feng, Paul A.S. Breslin. Monell Chemical Senses Center, Philadelphia, PA, United States

41 #P144  Neutrophil infiltration impairs peripheral taste function
Liqiao Shi, Lynnette Mccluskey. Medical College of Georgia, Augusta, GA, United States

42 #P145  Mouse taste buds express vesicular glutamate transporter type 2
Leslie Stone1,2, Catherine Anderson1,2, Daniel Goldberg1,2, Sue Kinnamon1,2. 1Dept. Biomedical Sciences, Colorado State University, Fort Collins Colorado, 2Rocky Mountain Taste & Smell Center, University of Colorado, Aurora, Colorado

43 #P146  Serotonin Inhibits ATP Secretion in Mouse Taste Buds
Yijen A. Huang1, Stephen D. Roper1,2. 1Department of Physiology & Biophysics, Miller School of Medicine, University of Miami, Miami, FL, United States, 2Program in Neuroscience, University of Miami, Miami, FL, United States

44 #P147  Expression of an Inwardly-Rectifying Potassium Channel (ROMK) in Mouse Glial-like Taste Cells
Gennady Dvoryanchikov1, Michael Sinclair2, Nirupa Chaudhari1,2. 1Department of Physiology and Biophysics, University of Miami Miller School of Medicine, Miami, FL, United States, 2Program in Neurosciences, University of Miami Miller School of Medicine, Miami, FL, United States

45 #P148  Cortical Processing of Learned Aversive Odors in Awake Rats
Chien-Fu F Chen1,3, Donald A Wilson1,2. 1Nathan Kline Institute, Orangeburg, NY, United States, 2NYU School of Medicine, New York, NY, United States, 3The University of Oklahoma, Norman, OK, United States

46 #P149  Strategy for recombinant expression of functional N-terminal domain of human T1R3 taste receptor produced in Escherichia coli
Elodie Maitrepiere, Maud Sigoillot, Loïc Briand. UMR 1129 INRA-ENESAD-UB FLAVIC, Dijon, France
Identifying TRPA1 agonists by monitoring intracellular calcium levels in HEK cells
Paige M. Roe, Erik C. Johnson, Wayne L. Silver. Wake Forest University, Winston-Salem, NC, United States

In Vitro Nematocidal Activity of TRPA1 Active Compounds from Perilla Frutescens
Angela Bassoli1, Gigliola Borgonovo1, Sara Caimi1, Gabriella Morini2, Francesco D’Errico3, Giada D’Errico3. 1DISMA-University of Milano, Milano, Italy, 2University of Gastronomic Sciences, Pollenzo (CN), Italy, 3University of Naples, Napoli, Italy

Olfactory rivalry: Competing olfactory processing between the two nostrils and in the cortex
Wen Zhou, Denise Chen. Rice University, Houston, TX, United States

Is there a difference in odor processing in response to left vs. right-sided odor stimulation?
Anna M. Kleemann1, Jessica Albrecht1,2, Veronika Schöpf3, Rainer Kopietz1, Katrin Haegler1, Rebekka Zernecke1, Marco Paolini1, Imke Eichhorn1, Jennifer Linn1, Hartmut Brückmann1, Martin Wiesmann1,4. 1Department of Neuroradiology, Ludwig-Maximilians-University of Munich, Munich, Germany, 2Monell Chemical Senses Center, Philadelphia, PA, United States, 3MR Centre of Excellence, Medical University Vienna, Vienna, Austria, 4Department of Radiology and Neuroradiology, Helios Kliniken Schwerin, Schwerin, Germany

Brain representation of subjective pleasantness
Yaara Yeshurun, Yadin Dudai, Noam Sobel. Weizmann Institute of Science, Rehovot, Israel

Olfactory intensity coding: an fMRI study
Anat Arzi, Yaara Yeshurun, Noam Sobel. Department of Neurobiology, The Weizmann Institute of Science, Rehovot, Israel
Development and Testing of a Neural Recording System for Chemosensory Behavioral Neuroscience
Robert Rennaker¹, Donald Wilson²,³. ¹University of Oklahoma, Norman, OK, United States, ²Nathan Kline Institute, NY, NY, United States, ³New York University School of Medicine, NY, NY, United States

The effect of learning and attention on odor responses in piriform cortex
Jennifer D Whitesell¹,², Wilder Doucette¹,², Diego Restrepo¹,². ¹Neuroscience Program, Denver, CO, United States, ²Cell and Developmental Biology, Denver, CO, United States

Mapping Local Inhibitory Circuits in the Rat Piriform Cortex using Photostimulation of Caged Glutamate
Victor M. Luna, Diana L. Pettit. Dept of Neuroscience, Albert Einstein College of Medicine, Bronx, NY, United States

The olfactory bulb as cortical model system
Thomas A. Cleland. Dept. Psychology, Cornell University, Ithaca, NY, United States
The sense of taste is indispensable for animals to find out a proper way of living by selection of foods at their discretion. Taste has also been a mainstay for construction of historical human cultures and modern food industries. However, no systematic information has been available regarding the molecular logic of intracellular taste signaling and associated chemical entities.

My study on the molecular biology of sweet, bitter, sour, salty and umami tastes had humble beginnings 20 years ago and then traced a unique path of development to reveal important parts of the signaling pathways and a series of responsible molecules. The process of the study has the following lineup: 1, identification of taste cells in taste buds and analysis of signal transduction; 2, construction of primarily cultured taste bud cells; 3, comparative analysis of taste signaling mechanisms in model fish (medaka) and mammals; 4, genomics of signal transduction from taste nerves to the brain and verification of the long hypothesized “labeled line theory”; and 5, application of these results. The last item (5) was investigated by the use of neoculin, an enigmatic sweet protein occurring in a tropical fruit that has sensory activity to convert sourness to stronger sweetness. Our X-ray crystallography and molecular dynamics simulation of neoculin as well as its mode of binding to hT1R2-hT1R3 provided new insights into the interface between taste molecular biology and new food chemistry exploring a taste (sourness)-taste (sweetness) interaction. The elucidation of this event would contribute to our increased understanding of the sense of taste as a scientifically and industrially interesting modality of life.
8:15 #34 Top-down Modulatory Influences on Central Encoding of Taste and Flavor in Humans
Dana Small1,2. 1The John B Pierce Laboratory, New Haven, CT, United States, 2Yale University, New Haven, CT, United States

8:45 #35 Roles of cognition and attention in the neural processing of taste and odor
Edmund Rolls. Oxford Centre for Computational Neuroscience

9:15 #36 Cognitive influences on taste processing in the gustatory cortex, orbitofrontal cortex and amygdala
Alfredo Fontanini. Department of Neurobiology and Behavior, SUNY Stony Brook, Stony Brook, NY, United States

9:45 #37 The piriform cortex plays an active role in olfactory-guided decision making
Linda Hermer-Vazquez. University of Florida, Center for Smell and Taste, Gainesville, FL, United States
7:00 – 11:00 pm  POSTER SESSION IV: CHEMOSENSORY TRANSDUCTION AND PERIRECEPTOR EVENTS
North Ballroom

1  #P160  PI3K-gamma in olfactory signal transduction in mice
Daniela Brunert¹, Kirill Y. Ukhanov¹, Elizabeth A. Corey¹,
Barry W. Ache¹². ¹Whitney Laboratory, Center for Smell and Taste, McKnight Brain Institute, University of Florida,
Gainesville, FL, United States, ²Depts. of Zoology and Neuroscience, University of Florida, Gainesville, FL, United States

2  #P161  Differential sensitivity to monosodium glutamate in Type II and Type III taste cells
Aurelie Vandenbeuch¹², Catherine B. Anderson¹², Sue C. Kinnamon¹². ¹University of Colorado Denver and Health Sciences Center, Denver, CO, United States, ²Rocky Mountain Taste and Smell Center, Denver, CO, United States

3  #P162  The Second Messenger Pathways in TRPC2 Knockout Mouse Vomeronasal Sensory Neurons
Chun Yang¹, Peng Zhang², Rona JDelay¹. ¹Department of Biology, Vermont Chemical Sensory group, University of Vermont, Burlington, VT, United States, ²Massachusetts General Hospital and Harvard Medical School, Charlestown, MA, United States

4  #P163  PI3K mediated signaling in lobster olfactory signal transduction
Elizabeth A Corey¹, Adeline Pezier¹, Katharina Klasen¹,
Barry W Ache¹². ¹Whitney Lab University of Florida, St Augustine, FL, United States, ²Center for Smell and Taste, and McKnight Brain Institute Depts. of Zoology and Neuroscience, University of Florida, Gainesville, FL, United States
**Poster Numbering Key:**
The first number indicates the poster board number
The second number (#Pxxx) indicates the poster abstract number

5  #P164  Different response properties between Type II and Type III taste bud cells in mouse fungiform papillae
Ryusuke Yoshida¹, Toshiaki Yasuo¹, Yoshihiro Murata¹, Masashi Jyotaki¹, Yuchio Yanagawa³, Kunihiko Obata³, Hiroshi Ueno⁴, Robert F. Margolskee³, Yuzo Ninomiya¹. ¹Sect. of Oral Neurosci., Grad. Sch. of Dental Sci., Kyushu Univ., Fukuoka, Japan, ²Grad Sch. of Med., Gunma Univ., Maebashi, Japan, ³RIKEN, Wako, Japan, ⁴Nara Women’s Univ., Nara, Japan, ⁵Mount Sinai Sch. of Med., NY, NY, United States

6  #P165  Receptor-dependent PIP₂ resynthesis restores sweet and bitter inhibitions of potassium currents
Fang-li Zhao, Scott Herness. The Ohio State University, Columbus, OH, United States

7  #P166  Native TRPM5 currents recorded from posterior rat taste receptor cells
Fangli Zhao, Luc Jaber, Randy Hivley, Scott Herness. The Ohio State University, Columbus, OH, United States

8  #P167  Novel Insights into Odorant Recognition: A Computational and Functional Analysis of Ligand Binding to the Human Olfactory Receptor OR2AG1
Lian Gelis¹, Steffen Wolf², Klaus Gerwert², Hanns Hatt¹, Eva M. Neuhaus¹. ¹Department of Cellular Physiology, Ruhr-University Bochum, Bochum, Germany, ²Department of Biophysics, Ruhr-University Bochum, Bochum, Germany

9  #P168  Olfactory Neuron Response Statistics: a Cross Species Analysis
Rafi Haddad¹², David Harel¹, Noam Sobel³. ¹Department of Computer Science and Applied Mathematics, Rehovot, Israel, ²Department of Neurobiology, the Weizmann Institute of Science, Rehovot, Israel

10 #P169  Determinants Of Agonist Sensitivity In An Insect Olfactory Receptor
Andrew S. Nichols, Charles W. Luetje. Molecular and Cellular Pharmacology, University of Miami, Miller School of Medicine, Miami, FL, United States
11 #P170  Visualization of Assayed Olfactory Chemical Space  
Zita Peterlin, Armen Enikolopov, Stuart Firestein.  
*Columbia University, New York, NY, United States*

12 #P171  Phosphoinositide-3-kinase Dependent Signaling in Mammalian Olfactory Receptor Neurons  
Kirill Ukhanov\textsuperscript{1,2}, Elizabeth A. Corey\textsuperscript{1}, Katharina Klasen\textsuperscript{1,2}, Daniela Brunert\textsuperscript{1,2}, Barry W. Ache\textsuperscript{1,2,3}. \textsuperscript{1}University of Florida, Whitney Laboratory, St. Augustine, FL, United States, \textsuperscript{2}University of Florida, Center for Smell and Taste, McKnight Brain Institute, Gainesville, FL, United States, \textsuperscript{3}University of Florida, Depts. of Zoology and Neuroscience, Gainesville, FL, United States

13 #P172  The Effects of Membrane Permeant and Impermeant Carbonic Anhydrase Inhibitors on the EOG and NMP Responses to CO\textsubscript{2} in Mice  
Lee Coates\textsuperscript{1,2}, Tabitha L. Novosat\textsuperscript{2}, Ryan J. Hanson\textsuperscript{2}, Shane P. Hennessy\textsuperscript{2}, Jessica K. Kenemuth\textsuperscript{2}. \textsuperscript{1}Department of Biology, Allegheny College, Meadville, PA, United States, \textsuperscript{2}Neuroscience Program, Allegheny College, Meadville, PA, United States

14 #P173  Identification of a novel Calcium Activated Chloride Channel in the Cilia of Olfactory Sensory Neurons: TMEM16b  
Stefan Kurtenbach*\textsuperscript{1}, Sebastian Rasche*\textsuperscript{1}, Bastian Tötter\textsuperscript{1}, Jenny Adler\textsuperscript{2}, Astrid Tschapek\textsuperscript{2}, Hanns Hatt\textsuperscript{1}, Bettina Warscheid\textsuperscript{2}, Eva M. Neuhaus\textsuperscript{1}. \textsuperscript{1}Department of Cell Physiology, Ruhr-University, Bochum, \textsuperscript{2}Medical Proteome-Center, Ruhr-University, Bochum
* both authors contributed equally to this work

15 #P174  Biotransformation of odorants modifies the olfactory signal  
Nicolas Thiebaud\textsuperscript{1}, Stéphanie Véloso Da Silva\textsuperscript{2}, Ingrid Jakob\textsuperscript{2}, Gilles Sicard\textsuperscript{2}, Yves Artur\textsuperscript{1}, Jean-Marie Heydel\textsuperscript{1}, Anne-Marie Le Bon\textsuperscript{1}. \textsuperscript{1}UMR 1129 FLAVIC INRA Université de Bourgogne ENESAD, DIJON, France, \textsuperscript{2}UMR CESG 5170 CNRS Université de Bourgogne INRA, DIJON, France

16 #P175  Homeostatic Control of Sensory Output in Basal Vomeronasal Neurons: Activity-Dependent Expression of Ether-à-Go-Go Related Gene Potassium Channels  
Silke Hagendorf, Corinna Engelhardt, Daniela Fluegge, Marc Spehr. Department of Cellular Physiology, Ruhr-University, Bochum, Germany
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<tr>
<th>Poster Number</th>
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<tbody>
<tr>
<td>17 #P176</td>
<td>Movement of Pheromone Inside Insect Olfactory Sensillae</td>
<td>Thomas M Dykstra. Dykstra Laboratories, Inc., Gainesville, FL, United States</td>
</tr>
<tr>
<td>18 #P177</td>
<td>Pathophysiological role of ENaC in a mammalian model of diabetes</td>
<td>Arian F Baquero, Stephanie Croasdell, Timothy A Gilbertson. Utah State University, Logan, UT, United States</td>
</tr>
<tr>
<td>19 #P178</td>
<td>Response Latency To Lingual Chemical Stimulation Distinguishes Neuron Types Within The Geniculate Ganglion</td>
<td>Joseph M Breza, Alexandre Nikonov, Robert J Contreras. Florida State University, Tallahassee, FL, United States</td>
</tr>
<tr>
<td>20 #P179</td>
<td>Cell-Cell Communication In Intact Taste Buds Through ATP Signaling</td>
<td>Robin P Dando¹, Stephen D Roper¹². ¹Department of Physiology and Biophysics, Miller School of Medicine, University of Miami, Miami, FL, United States, ²Program in Neuroscience, Miller School of Medicine, University of Miami, Miami, FL, United States</td>
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<tr>
<td>21 #P180</td>
<td>Taste cells express and secrete glucagon-like peptide 1</td>
<td>Zaza Kokrashvili, Robert F. Margolskee. Mount Sinai School of Medicine, New York, NY, United States</td>
</tr>
<tr>
<td>22 #P181</td>
<td>Sodium/calcium exchangers selectively contribute to the regulation of cytosolic calcium levels in mouse taste cells</td>
<td>Agnieszka I. Laskowska, Kathryn F. Medler. University at Buffalo, Buffalo, NY, United States</td>
</tr>
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<td>23 #P182</td>
<td>The multiple PDZ domain protein 1 (MUPP1) - Role in the olfactory signal transduction cascade</td>
<td>Sabrina Baumgart, Ruth C. Dooley, Hanns Hatt, Eva M. Neuhaus. Ruhr-University Bochum, Bochum, Germany</td>
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<td>24 #P183</td>
<td>Gurmarin inhibits the Sweet Receptor by Binding to the Venus Fly Trap Module of T1R3</td>
<td>Emeline L. Mailet, Laura Pelletier, Timothy J. Cardozo, Jeniffer Quijada, Prisca Silie, Baohua Zhao, Yuzo Ninomiya, Marianna Max, Robert F. Margolskee. Mount Sinai School of Medicine, Department of Neuroscience. New York, NY, United States</td>
</tr>
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25  #P184  Effect of inosine monophosphate (IMP) on taste perception of methionine and valine by mice
Yuko Murata1, Alexander A. Bachmanov2, Gary K. Beauchamp3. 1National Research Institute of Fisheries Science, Yokohama, Japan, 2Monell Chemical Senses Center, Philadelphia, PA, United States

26  #P185  Mitigation of irradiation effects on taste epithelium in the Protein Kinase C delta null mouse
H.M. Nguyen1, M.E. Reyland2, L.A. Barlow4. 1Dept. of Cell & Developmental Biology, and The Rocky Mountain Taste and Smell Center, School of Medicine, University of Colorado Denver, Aurora, CO, United States, 2Dept. of Craniofacial Biology, School of Dental Medicine, University of Colorado Denver, Aurora, CO, United States

27  #P186  Effect of Nicotinic Acetylcholine Receptor (nAChR) Blockers, Mecamylamine (Mec) and Dihydro-β-erythroidine (DHβE) on the Chorda Tympani Responses to Nicotine in TRPM5 Knockout (KO) Mice
Albino J. Oliveira-Maia1, Tam-Hao T. Phan2, Shobha Mummalaneni2, Pamela Melone2, Miguel A. L. Nicolelis1, Sidney A. Simon1, John A. DeSimone2, Vijay Lyall3. 1Department of Neurobiology, Duke University Medical Center, Durham, NC, United States, 2Department of Physiology and Biophysics, Virginia Commonwealth University, Richmond, VA, United States

28  #P187  1,3-N-Acetylglucosaminytransferase 1 (β3GnT1) regulates signaling in olfactory neurons
Timothy R. Henion, Gary A. Schwarting. University of Massachusetts Medical School, Worcester, MA, United States

29  #P188  Penetrating the Permeability Barrier that Surrounds Mouse Taste Buds
Elizabeth Pereira1, Robin Dando1, Nirupa Chaudhari1,2, Stephen Roper1,2. 1Miller School of Medicine, University of Miami, Miami, FL, United States, 2Program in Neuroscience, University of Miami, Miami, FL, United States
30 #P189 Electrophysiological Response to Tactile Stimulation of the Tongue in the Presence of Oils and Gustatory Stimuli
Thomas C. Pritchard¹, Erin N. Nedderman¹, John Coupland², Ralph Norgren¹. ¹The Pennsylvania State University College of Medicine, Hershey, PA, United States, ²The Pennsylvania State University Park, PA, United States

31 #P190 Optimization of the Production of Recombinant Brazzein Secreted by the Yeast *Pichia pastoris*
Antoine Rachid, Christine Belloir, Joëlle Chevalier, Catherine Desmetz, Marie-Louise Miller, Nicolas Poirier, Loïc Briand. INRA, UMR 1129 FLAVIC, Dijon, France

32 #P191 Autocrine Regulation of ATP Secretion in Mouse Taste Buds
Stephen D. Roper¹,², Yijen A. Huang¹. ¹Miller School of Medicine, University of Miami, Miami, FL, United States, ²Program in Neuroscience, University of Miami, Miami, FL, United States

33 #P192 Acidic Substances Added in the Oral Cavity Reduce Our Bitter Taste Sensation by pH-Dependent Inhibition of hTAS2R Response
Takanobu Sakurai¹,², Takumi Misaka², Toshitada Nagai², Yoshiro Ishimaru², Shinji Matsuo¹, Tomiko Asakura², Keiko Abe¹. ¹General Research Institute of Food Science and Technology, Nissin Foods Holdings Co., Ltd., Shiga, Japan, ²Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Tokyo, Japan

34 #P193 Unraveling the Signal Transduction Cascade Mediated by the Olfactory Receptor hOR51E2 in Prostate Cancer Cells
Jennifer Spehr, Markus Osterloh, Weiyi Zhang, Lian Gelis, Hanns Hatt, Eva M. Neuhaus. Dept. of Cellular Physiology, Ruhr-University Bochum, Bochum, Germany
Expression and Functionality of Oxytocin Receptor in Mouse Taste Cells
Michael Sinclair¹, Gennady Dvoryanchikov², Katsuhiko Nishimori³, Nirupa Chaudhari¹,². ¹Program in Neurosciences, University of Miami Miller School of Medicine, Miami, FL, United States, ²Department of Physiology and Biophysics, University of Miami Miller School of Medicine, Miami, FL, United States, ³Department of Molecular and Cell Biology, Graduate School of Agricultural Science, Tohoku University, Miyagi 981-8555, Japan

Inhibition of bitter taste receptors
Jay Slack¹, Anne Brockhoff², Batram Claudia², Susann Menzel², Caroline Sonnabend², Maik Behrens², Nicole Brune¹, Ioana Ungureanu¹, Christopher Simons¹, Wolfgang Meyerhof². ¹Givaudan Flavors Corp, Cincinnati, OH, United States, ²German Institute of Human Nutrition Potsdam-Rehbruecke, Potsdam-Rehbruecke, Germany

Solitary chemosensory cells (SCCs) in the pancreas
Marco Tizzano¹,², Zaza Kokrashvili⁴, Bedrich Mosingier⁴, Sukumar Vijayaraghavan¹,², Robert F Margolskee⁴, Thomas E Finger¹,². ¹Cell & Development Biology, Univ. of Colorado at Denver, Aurora, CO, United States, ²Rocky Mountain Taste & Smell Center, Aurora, CO, United States, ³Physiology and Biophysics, Univ. of Colorado at Denver, Aurora, CO, United States, ⁴Department of Neuroscience, Mount Sinai School of Medicine, New York, NY, United States

The prenyl binding protein PrBP impedes trafficking of Golf in olfactory sensory neurons (OSNs)
Mavis A. Irwin¹, Houbin Zhang², Michelle Stamm¹, Wolfgang Baehr², Mary Lucero¹. ¹University of Utah, Department of Physiology, Neuroscience Program, Salt Lake City, UT, United States, ²University of Utah, Department of Ophthalmology, Salt Lake City, UT, United States
39 #P198  Odor-stimulated phosphoinositide signaling in mammalian olfactory receptor neurons
Katharina Klasen¹, Elizabeth A. Corey¹, Christian H. Wetzel², Hanns Hatt², Barry W. Ache¹. ¹Whitney Laboratory, Center for Smell and Taste, McKnight Brain Institute, University of Florida, Gainesville, FL, United States, ²Department of Cell Physiology, Ruhr-University Bochum, Bochum, Germany

40 #P199  A Proteomic Screen of Mouse Cilial Membranes Reveals TMEM16B as an Olfactory Calcium-Activated Chloride Channel
Aaron B Stephan¹, Eileen Y Shum¹, Sarah Hirsh¹, Katherine D Cygnar¹, Haiqing Zhao¹, Johannes Reisert². ¹Johns Hopkins University, Baltimore, MD, United States, ²Monell Chemical Senses Center, Philadelphia, PA, United States

41 #P200  WITHDRAWN

42 #P201  TRPM5 Expressed In Solitary Chemosensory Cells Is Involved In Regulating Chemical Access To The Vomeronasal Organ
Kurt Krosnowski, Nejat Merdato, Tatsuya Ogura, Weihong Lin. University of Maryland Baltimore County, Catonsville, MD, United States

43 #P202  Transient receptor potential V1 is directly activated by nickel ions
Matthias Luebbert¹, Debbie Radtke¹², Hanns Hatt¹, Christian H. Wetzel¹. ¹Department of Cellular Physiology Ruhr University Bochum, Bochum, Germany, ²Ruhr University Research School, Bochum, Germany

44 #P203  Cetylpypyridinium Chloride Effects on Sodium and Potassium Taste Stimulus Sensing in Hamster
Clara C. McClenon, Brooke L. Reidy, Victoria M. Stevens, Robert E. Stewart. Washington and Lee University, Lexington, VA, United States
Establishment and Optimization of Antigen Capture Polymerase Chain Reaction Utilizing the Epithelial Sodium Channel Subtype Delta Antibody
M Hakan Ozdener, Joseph G Brand, Jie Cao, John H Teeter.
Monell Chemical Senses Center, Philadelphia, PA, United States

Direct evidence of the role of TRPM5 in bitter transduction in enteroendocrine cells
Bhavik P. Shah1,2, Pin Liu1,2, Tian Yu1,2, Dane R. Hansen1,2, Timothy A. Gilbertson1,2. 1Department of biology, Utah State University, Logan, UT, United States, 2Center for Advanced Nutrition, Utah State University, Logan, UT, United States
Saturday, April 25, 2009

7:30 am - 1:00 pm
REGISTRATION
Prefunction Area

6:30 pm - 7:30 pm
CONTINENTAL BREAKFAST

7:30 - 9:00 am
SYMPOSIUM
FUNCTIONAL EVOLUTION OF CHEMOSENSORY RECEPTORS
Chair/Organizer: Hiro Matsunami and Hanyi Zhuang
South Ballroom

8:00 - 10:05 am

8:00 #38 Positive Selection Shapes the Function of an Odorant Receptor for Sex-steroid Derived Odors in Primates
Hanyi Zhuang, Mingshan Chien, Hiroaki Matsunami.
Duke University Medical Center, Durham, NC, United States

8:25 #39 Copy-number variation map obtained by high-resolution genomics reflects human olfactory receptor diversity and evolution
Jan Korbel¹, Yehudit Hasin², Tsviya Olender², Alexander Eckehart Urban³, Philip Kim⁴, Jason Affourtit⁵, Timothy Harkins⁶, Michael Egholm⁷, Michael Snyder⁸, Doron Lancer², Mark Gerstein³. ¹EMBL, Heidelberg, Germany, ²Weizmann Institute, Rehovot, Israel, ³Yale University, New Haven, CT, United States, ⁴University of Toronto, Toronto, ON, Canada, ⁵454 Life Sciences, Branford, CT, United States, ⁶Roche Applied Science, Indianapolis, IN, United States

8:50 #40 Sequencing the entire OR gene repertoire (and other GPCRs) in a large number of individuals
Yoav Gilad. University of Chicago, Chicago, IL, United States

9:15 #41 Rapid evolution of two odorant-binding protein genes, Obp57d and Obp57e, in Drosophila
Takashi Matsuo. Tokyo Metropolitan University, Tokyo, Japan

9:40 #42 Bimodal Function of Drosophila Odorant Receptors
Dieter Wicher, Ronny Schäfer, Marcus C. Stensmyr, Bill S. Hansson. Max Planck Institute for Chemical Ecology, Jena, Germany

10:05 - 10:30 am
BREAK
Prefunction Area
10:30 am - 12:30 pm SYMPOSIUM
MAKING SENSE OF FAT TASTE
Chair/Organizer: Tim Gilbertson
South Ballroom
Discussants: Robert Contreras and Jean-Pierre Montmayeur

10:30 #43 Making Sense of Fat Taste
Timothy A. Gilbertson. Utah State University, Logan, UT, United States

10:35 #44 Ligand specificities to putative fat receptor candidates CD36 and GPR120 and licking behavior corresponding to the ligands in mice
Shigenobu Matsumura, Takeshi Yoneda, Ai Eguchi, Yasuko Manabe, Satoshi Tsuzuki, Kazuo Inoue, Tohru Fushiki.
Graduate School of Agriculture, Kyoto University, Kyoto, Japan

11:00 #45 Fatty Acid Transduction in Chemosensory Cells
Tian Yu, Bhavik P. Shah, Pin Liu, Timothy A. Gilbertson.
Utah State University, Logan, UT, United States

11:25 #46 Oral Detection of Fatty Acids by Rats
David W. Pittman. Department of Psychology, Wofford College, Spartanburg, SC, United States

11:50 #47 Oral Detection of Free Fatty Acids in Humans
Richard D Mattes. Purdue University, W. Lafayette, IN, United States

12:45 - 2:45 pm CLINICAL LUNCHEON (Ticketed event)
OLFACTORY DYSFUNCTION IN SCHIZOPHRENIA: A MODEL SYSTEM TO INVESTIGATE DEVELOPMENTAL NEUROPATHOLOGY
Chair/Organizer: C. Murphy
Bruce Turetsky, MD, University of Pennsylvania
The Keys Room

Schizophrenia is a complex heterogenous disorder that results in widespread functional brain impairments. However, there is now increasing consensus that this is a genetically-mediated neurodevelopmental disorder characterized by altered neural circuitry, synaptic functioning and intracellular signaling mechanisms. There is also clear evidence of associated olfactory deficits. This presentation will review what is known about olfactory impairments in schizophrenia and highlight the group’s efforts to delineate the neural substrates and mechanisms underlying these deficits. In this context, the olfactory system can provide insights into the broader mechanisms underlying CNS pathology in schizophrenia.
3:00 - 5:30 pm

WORKSHOP: COMPUTATIONAL PROBLEMS IN SEQUENTIAL STAGES OF ODOR PROCESSING
Chair/Organizer: Tom Cleland and Dan Dougherty
South Ballroom

Times approximate given the workshop format.

3:00 #48 Exploring the Interaction between Odorants and Odorant Receptors using Functional and Computational Methods
Charles W. Luetje, Sarah E. Repicky, Tatjana Abaffy. Molecular and Cellular Pharmacology, University of Miami, Miami, FL, United States

3:25 #49 Modeling Diversity in the Signal Transduction of the Mouse Olfactory Receptor Neuron
Daniel P. Dougherty. Michigan State University, Lyman Briggs College of Science and Dept. of Statistics and Probability, East Lansing, MI, United States

3:50 #50 Odorant mixture interactions in rat olfactory receptor neurons: models and experiments
Jean-Pierre Rospars1, Petr Lansky2, Michel Chaput3, Patricia Duchamp-Viret3. 1UMR 1272 Physiologie de l’Insecte, INRA, Versailles, France, 2Institute of Physiology, Academy of Sciences, Prague, Czech Republic, 3UMR 5020 Neurosciences Sensorielles, Comportement, Cognition, Lyon, France

4:15 #51 Odor Maps in the Mouse Olfactory Bulb
Venkatesh N Murthy1, Dinu F Albeanu2, Edward R Soucy1, Markus Meister1. 1Harvard University, Cambridge, MA, United States, 2Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, United States

4:40 #52 Distributed Lateral Inhibition in the Olfactory Bulb: Anatomical Evidence and Functional Implications of Long-range Interactions of Mitral and Tufted Cells
Matthew E Phillips, Hetal K Patel, David H Kim, Gordon M Shepherd, David C Willhite. Yale University, New Haven, CT, United States

5:05 #53 A two-stage model of odor representation and processing in the olfactory bulb
Thomas A. Cleland. Dept. Psychology, Cornell University, Ithaca, NY, United States
**Poster Numbering Key:**
The first number indicates the poster board number
The second number (#Pxxx) indicates the poster abstract number

8:00 am - 12:30 pm  **POSTER SESSION V: CHEMOSENSORY MEMORY/CENTRAL SYNAPTIC PHYSIOLOGY/NEUROGENESIS**

**North Ballroom**

1  #P206  ATP Promotes Proliferation of Olfactory Sensory Neuron (OSN) and Sustentacular Progenitor Cells in Adult Mouse Olfactory Epithelium (OE)
Colleen C. Hegg, Cuihong Jia. *Michigan State University, East Lansing, MI, United States*

2  #P207  Sniffing out fear: Anxiety enhances olfactory discrimination learning via aversive conditioning
Lucas Novak, Emily Cahill, Wen Li. *University of Wisconsin-Madison, Department of Psychology, Madison, WI, United States*

3  #P208  Expansion, Engraftment and Multi-Lineage Potency of Mouse Neonatal Olfactory Neurospheres
Richard C. Krolewski, James E. Schwob. *Department of Anatomy & Cellular Biology, Tufts University School of Medicine, Boston, MA, United States*

4  #P209  Comparison of incidental and intentional learning of olfactory and visual stimuli
Per Møller¹, Dag Piper², Ditte Hartvig¹, Egon P Köster¹.
¹University of Copenhagen, Frederiksberg, Denmark,
²Symrise Germany, Holzminden, Germany

5  #P210  Characterizing the Relationship between Odor Memory and Identification Performance using Generalized Linear Modeling
Konstantin A. Rybalsky, Melinda S. Brearton, Erica J. Mannea, Jason M. Bailie, Steven R. Howe, Robert A. Frank.
*University of Cincinnati, Cincinnati, OH, United States*

6  #P211  Embryonic Chicks Can Learn the Scent of a Putative Predator
Daisy M. Yuhas, Emma L. Stanley, Julie C. Hagelin.
*Department of Biology, Swarthmore College, Swarthmore, PA, United States*
Role of Glucagon-Like Peptide-1 in Conditioned Taste Aversion
John-Paul Baird, Laura H. Turner, Christina Wright, Julia S. Lord, Lindsay A. Grigg. Amherst College, Amherst, MA, United States

Altered Gene Expression In Brainstem And Forebrain Nuclei Following Acquisition Of A Learned Taste Aversion
Siva K. Panguluri, Robert F. Lundy. Department of Anatomical Sciences and Neurobiology, University of Louisville, School of Medicine, Louisville, KY, United States

Expression of Transient Receptor Potential (TRP) Channels in the Mouse Main Olfactory Bulb (MOB)
Hong-Wei Dong¹, Sheng-Yuan Ding², Qiang Nai¹, Fu-Ming Zhou², Matthew Ennis¹. ¹Dept, Anat & Neurobiology, University of Tennessee, HSC, Memphis, TN, United States, ²Dept. Pharmacology, University of Tennessee, HSC, Memphis, TN, United States

Cholinergic modulation of glomerular circuits
Shaolin Liu, Michael T. Shipley. University of Maryland School of Medicine, Baltimore, MD, United States

Synchronization of spike activity in tufted cells of mouse olfactory bulb
Graeme Lowe, Jie Ma. Monell Chemical Senses Center, Philadelphia, PA, United States

Adult neurogenesis in the mouse accessory olfactory bulb
Alexia Nunez-Parra, Ricardo C. Araneda. NACS Program & Biology Department, University of Maryland, College Park, MD, United States

Gap junction coupling and granule cell connectivity both contribute to long-range synchrony in the olfactory bulb
Thomas S. McTavish, Diego Restrepo, Nathan Schoppa. University of Colorado Denver, Denver, CO, United States
14 #P219 Synaptic markers show heterogeneous mitral and tufted cell synapse distributions
Matthew E. Phillips¹², Hetal K. Patel¹, David H. Kim¹, Gordon M. Shepherd¹, David C. Willhite¹. 'Department of Neurobiology, Yale University School of Medicine, New Haven, CT, United States, ²Department of Physics, Yale University, New Haven, CT, United States

15 #P220 Neuronal Survival and Replacement in the Neuron-depleted Olfactory System
Huan Liu, Kathleen Guthrie. Florida Atlantic University, Boca Raton, FL, United States

16 #P221 Glomerular Regulation of Mitral Cell Responses to Sensory Input
Zuoyi Shao, Adam C. Puche, Michael T. Shipley. Department of Anatomy & Neurobiology, Program in Neuroscience, University of Maryland School of Medicine, Baltimore, MD, United States

17 #P222 Characteristics of spontaneous and evoked EPSCs of interneurons in the superficial external plexiform layer of olfactory bulb
Yu-Feng Wang, Kathryn A Hamilton. LSU Health Sciences Center– Shreveport, Shreveport, LA, United States

18 #P223 1 and 2 Noradrenergic Receptor Exert Opposing Effects on the Excitability of Rat Main Olfactory Bulb (MOB) Granule Cells
Qiang Nai¹, Hongwei Dong¹, Christiane Lins ter², Matthew Ennis¹. 'University of Tennessee, HSC, Memphis, TN, United States, ²2Dept. Neurobiology & Behavior, New York, NY, United States

19 #P224 Taurine deficiency causes loss of mitral cells in the olfactory bulb of mice
Martin Witt¹, Maria Kammerer², Ulrich Warskulat³, Dieter Häussinger³, Thomas Hummel¹. 'University of Rostock, Dept. of Anatomy, Rostock, Germany, ²TU Dresden, Dept. of Anatomy, Dresden, Germany, ³University of Düsseldorf, Experimental Hepatology, Düsseldorf, Germany, ⁴TU Dresden, Dept. of Otorhinolaryngology, Dresden, Germany
20  #P225  Adult and developmental expression of a GABA transporter by a subset of centrally derived glial cells in the antennal lobe of the moth
Lynne A Oland, Nicholas J Gibson, Leslie P Tolbert. University of Arizona, Tucson, AZ, United States

21  #P226  Heterogeneous Expression of Pannexin 1 and Pannexin 2 in the Olfactory Epithelium and Olfactory Bulb
Honghong Zhang, Chunbo Zhang. Department of Biological, Chemical and Physical Sciences, Illinois Institute of Technology, Chicago, IL, United States

22  #P227  Chloride imaging in trigeminal sensory neurons of mice
Debbie Radtke1,2, Nicole Schoebel1,2,3,4, Hanns Hatt1,2,4, Jennifer Spehr1. 1Department of Cellular Physiology, Ruhr-University, Bochum, Germany, 2Ruhr-University Research School, Bochum, Germany, 3Graduiertenkolleg “Development and Plasticity of the Nervous System”, Ruhr-University, Bochum, Germany, 4International Graduate School of Neuroscience, Ruhr-University, Bochum, Germany

23  #P228  Odor discrimination by mice with long-term unilateral naris occlusion and contralateral bulbectomy
Cathy Angely, David M. Coppola. Randolph-Macon College, Ashland, VA, United States

24  #P229  Characterization of GABA-Induced Responses of Trigeminal Sensory Neurons
Nicole Schoebel1,2,3,4, Annika Cichy1, Debbie Radtke1,4, Hanns Hatt1,3,4, Jennifer Spehr1. 1Department of Cellular Physiology, Ruhr-University, Bochum, Germany, 2Graduiertenkolleg, Bochum, Germany, 3International Graduate School of Neuroscience, Ruhr-University, Bochum, Germany, 4Ruhr-University Research School, Bochum, Germany

25  #P230  Properties of rostral nucleus of the solitary tract (rNST) GABAergic interneurons
Min Wang1, Robert M. Bradley1,2. 1Department of Biologic and Material Sciences, School of Dentistry, University of Michigan, Ann Arbor, MI, United States, 2Department of Molecular and Integrative Physiology, Medical School, University of Michigan, Ann Arbor, MI, United States
26 #P231  SOX2 Regulation Of Neurogenesis In The Adult Olfactory Epithelium  
Adam I Packard, James E Schwob. *Tufts University School of Medicine, Boston, MA, United States*

27 #P232  PACAP Enhances Cell Survival in Cultured Slices of Mouse Olfactory Bulb  
Mary T Lucero, Shami Kanekar. *University of Utah, Department of Physiology, Neuroscience Program, Salt Lake City, UT, United States*

28 #P233  Cytoarchitecture of Neuroblasts and their Stem Cell Niche Maintaining Adult Neurogenesis in the Olfactory Midbrain of Spiny Lobsters, *Panulirus argus*  
Manfred Schmidt, Charles D. Derby. *Neuroscience Institute, Georgia State University, Atlanta, GA, United States*

29 #P234  Ectopic gene expression by postnatal electroporation during olfactory interneurons neurogenesis  
Dongjing Zou¹, Alex Chesler¹, Claire Le Pichon¹, Jesse Brann¹, Ricardo Araneda², Stuart Firestein¹. ¹*Department of Biological Sciences, Columbia University, New York, NY, United States*, ²*Department of Biology, University of Maryland, College Park, MD, United States*

30 #P235  Deafferentation affects cell genesis and neuron survival in the olfactory bulb of adult zebrafish  
Christine A. Byrd-Jacobs, Ruth Villanueva. *Western Michigan University, Kalamazoo, MI, United States*

31 #P236  Cell specific deletion of BDNF leads to impairments in murine adult olfactory neurogenesis  
Kevin G Bath, Christine Neeb, Deqiang Jing, Francis S Lee. *Weill Medical College of Cornell, New York, NY, United States*

32 #P237  *In vivo* optical imaging of experience-induced olfactory bulb glomerular plasticity  
Max L. Fletcher¹, Johannes Richter², Wei R. Chen¹. ¹*University of Texas Medical School Department of Neurobiology and Anatomy, Houston, TX, United States*, ²*Yale University School of Medicine, New Haven, CT, United States*
Maternal Modulation of the Functional Emergence of the Hippocampus in Context Fear Learning in Infant Rats
Charlis Raineki¹,²,³, Parker Holman¹, Melissa Bugg³, Allyson Beasley³, Regina M. Sullivan¹,²,³. ¹Emotional Brain Institute, Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY, United States, ²Child and Adolescent Psychiatry, NYU Langone Medical Center, New York, NY, United States, ³Department of Zoology, University of Oklahoma, Norman, OK, United States

Rethinking statistical analysis of associative learning in an olfactometer
Nicolas Busquet, Diego Restrepo. University of Colorado Denver, Denver, CO, United States

Changes in Sniffing Patterns During Learning of the Association of Odor with Reward
Vanessa Carmean¹, Jennifer D Whitesell¹,², Diego Restrepo¹,². ¹Neuroscience Program, University of Colorado Denver Anschutz Medical Campus, Aurora, CO, United States, ²Department of Cell and Developmental Biology, University of Colorado Denver Anschutz Medical Campus, Aurora, CO, United States

Long-term reductions of olfactory sensitivity due to short-term exposures to a peri-threshold odorant
Jennifer Chen¹, Wen Zhou¹, Meng Zhang², Denise Chen¹. ¹Rice University, Houston, TX, United States, ²Harbin Medical University, Harbin, China

Learned preferences for odours determined by individual variations in taste intensity and hedonics
John Prescott¹, Martin Yeomans², Natalie Gould². ¹The University of Newcastle, Ourimbah, Australia, ²University of Sussex, Brighton, United Kingdom
SYMPOSIUM
FOLLOW THE HEAD, NOT ONLY THE NOSE:
TOP-DOWN INFLUENCES ON OLFATORY
PERCEPTION
Chair/Organizer: Monique Smeets
South Ballroom

7:00 #54 The Nose is Just the Beginning: Patterns, Objects and Experience in Olfaction
Donald A. Wilson1,2. 1Nathan Kline Institute, Orangeburg, NY, United States, 2NYU School of Medicine, New York, NY, United States

7:05 #55 Learning to smell: Olfactory perceptual learning and its ecological impact
Wen Li. University of Wisconsin-Madison, Department of Psychology, Madison, WI, United States

7:35 #56 Expectations About Health Effects Alter Odor Perception
Monique A. Smeets1, Patricia Bulsing2. 1Utrecht University, Utrecht, Netherlands, 2Unilever, Vlaardingen, Netherlands

8:05 #57 Implications For Remediation Of Health Effects From Odor Exposure
Pamela Dalton. Monell Chemical Senses Center, Philadelphia, PA, United States

8:35 #58 Olfaction and cognitive information processing
Denise Chen. Rice University, Houston, TX, United States
7:00 - 11:00 pm  POSTER SESSION VI: CHEMOSENSORY DEVELOPMENT AND PSYCHOPHYSICS I  
South Ballroom

1  #P243  Sonic hedgehog and Sox2 expression in taste cell progenitors in genetic mouse models of gustatory nerve transection  
Akira Ito, Michelle M. Sims, Jong-Gwan Kim, Christopher A. Nosrat. Department of Restorative Dentistry and Center for Cancer Research, University of Tennessee Health Science Center, Memphis, TN, United States

2  #P244  Expression of Stem Cell Factor and Kit receptor during development of the main and accessory olfactory systems  
Thomas K. Knott, Timothy R. Henion, Gary A. Schwarting. University of Massachusetts Medical School, Worcester, MA, United States

3  #P245  Differentiation and migration of neurons derived from the olfactory placode  
Alexandra M. Miller1,3, Helen B. Treloar1, Charles A. Greer1,2,3.  
1Department of Neurosurgery, Yale University School of Medicine, New Haven, CT, United States, 2Department of Neurobiology, Yale University School of Medicine, New Haven, CT, United States, 3Interdepartmental Neuroscience Program (INP), New Haven, CT, United States

4  #P246  Early GABAergic Specification of Subventricular Derived Progenitors  
Celine Plachez, Adam C. Puche. Department of Anatomy and Neurobiology, University of Maryland, School of Medicine, Baltimore, MD, United States

5  #P247  The positional variability of the P2, M72, and MOR23 glomeruli in the mouse main olfactory bulb in young and adult animals  
Ernesto Salcedo, Tuan Tran, Xuan Ly, Kyle Hanson, Eugene Kronberg, Diego Restrepo. University of Colorado Denver, Aurora, CO, United States

6  #P248  Sensory inputs modulate olfactory receptor expression patterns in the mouse olfactory epithelium  
Huihai Tian, Minghong Ma. Department of Neuroscience, University of Pennsylvania School of Medicine, Philadelphia, PA, United States
7 #P249 Influences of p53 gene in the development of olfactory neurons
Honghong Zhang, Chunbo Zhang. Department of Biological, Chemical and Physical Sciences, Illinois Institute of Technology, Chicago, IL, United States

8 #P250 How Does Adding Cocoa to Sucrose Affect Pain Tolerance?
Kristina Eggleston¹, Theresa White¹². ¹Le Moyne College, Syracuse, NY, United States, ²SUNY Upstate Medical University, Syracuse, NY, United States

9 #P251 Effects of Chocolate Consumption on Pain Perception and Tolerance
Scott Bonnette, Kristin McCombs, Amanda Stover, Kristian Winters, Bryan Raudenbush. Wheeling Jesuit University, Wheeling, WV, United States

10 #P252 Is perception of nasal patency a function of air temperature, humidity, mucosal heat loss, nasal resistance or trigeminal sensitivity?
Kara J. Blacker¹, Edmund Pribitkin², Yuehao Luo¹, Kai Zhao¹. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Thomas Jefferson University Hospital, Philadelphia, PA, United States

11 #P253 Retronasal and Oral-Cavity-Only Responses to TRPM8 Odorants
Kathleen E. Melville¹, James C. Navia², Bruce P. Halpern³. ¹Neurobiology and Behavior, Cornell University, Ithaca, NY, United States, ²Food Science, Auburn University, Auburn, AL, United States, ³Psychology and Neurobiology and Behavior, Cornell University, Ithaca, NY, United States

12 #P254 Eph/Ephrin Expression in the Developing and Adult Taste System
Gennadiy Katsevman, Michael Oleksiak, Natalia Hoshino, M William Rochlin. Loyola University Chicago, Chicago, IL, United States

13 #P255 Investigation of detection and pain thresholds at different sites at the human nasal mucosa in response to electrical stimuli
Mandy Scheibe, Annika Schmidt. Smell & Taste Clinic, Department of Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany
14 #P256  Time-Intensity ratings of nasal irritation from pulsed homologous alcohols
Paul M Wise, Kai Zhao, Charles J Wysocki. *Monell Chemical Senses Center, Philadelphia, PA, United States*

15 #P257  Nasal biopsy assessment of veterinary students exposed to formaldehyde in anatomy class
1*Monell Chemical Senses Center, Philadelphia, PA, United States, 2*Thomas Jefferson University, Philadelphia, PA, United States

16 #P258  Functional and Inflammatory Consequences of Veterinary Gross Anatomy Lab Enrollment: Effects of Formaldehyde on Chemosensation
*Monell Chemical Senses Center, Philadelphia, PA, United States*

17 #P259  Development and Evaluation of the Monell Odor Identification Task for the NIH Toolbox
1*Monell Center, Philadelphia, PA, United States, 2*Nemours/Alfred I. duPont Hospital for Children, Wilmington, DE, United States*

18 #P260  Musk odorants - a useful tool for the study of olfactory genetics
Antti J. Knaapila, Danielle R. Reed, Charles J. Wysocki, Gu Zhu, Nicholas G. Martin, Margaret J. Wright.  
1*Monell Chemical Senses Center, Philadelphia, PA, United States, 2*Queensland Institute of Medical Research, Brisbane, Australia*
19 #P261 Evaluation of a Forced-Choice, Paired-Comparison Tracking Procedure Method for Determining Taste Preferences Across the Lifespan
Julie A. Mennella¹, Laura D. Lukasewycz¹, James W. Griffith², Gary K. Beauchamp¹. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Northshore University HealthSystem, Evanston, IL, United States

20 #P262 OLFACT-Kô™: A Test for Assessing Olfactory Function in Young Children
Kathleen M. VanDeGrift, Lloyd Hastings. Osmic Enterprises, Inc., Cincinnati, OH, United States

21 #P263 Comparison of two different olfactory detection threshold tests of the Sniffin’ Sticks
Rebekka Zernecke¹, Birgit Vollmer¹, Jessica Albrecht¹², Anna M. Kleemann¹, Katrin Haegler¹, Jennifer Linn¹, Gunther Fesl¹, Hartmut Brückmann¹, Martin Wiesmann¹³. ¹Department of Neuroradiology, Ludwig-Maximilians-University of Munich, Munich, Germany, ²Monell Chemical Senses Center, Philadelphia, PA, United States, ³Department of Radiology and Neuroradiology, Helios Kliniken Schwerin, Schwerin, Germany

22 #P264 Longitudinal study of olfactory preferences during childhood
Fanny Rinck¹, Melissa Barkat-Defradas², Fanny Bourgeat¹, Catherine Rouby¹, Moustafa Bensafi¹. ¹CNRS UMR 5020, Lyon, France, ²CNRS UMR 5267, Montpellier, France

23 #P265 Neuronal and neural crest cell markers identify specific cell types in developing tongue and taste papillae
Hong-Xiang Liu, Yoshihiro Komatsu, Yuji Mishina, Charlotte Mistretta. School of Dentistry, University of Michigan, Ann Arbor, MI, United States

24 #P266 Impact of Proportionon Configural Perception of Odor Mixtures in a Newborn Mammal
Gérard Coureaud¹, David Gibaud¹, Elodie Le Berre²³, Benoist Schaal¹, Thierry Thomas-Danguin². ¹Centre Européen des Sciences du Goût (CESG), CNRS-UB-INRA, Dijon, France, ²FLAVIC, INRA-ENESAD-UB, Dijon, France, ³current address: Unilever Food and Health Research Institute, Vlaardingen, Netherlands
25  #P267  Correlation between olfactory bulb volume and olfactory function in children
Dorothee Buschhüter¹, Martin Smitka², Stefan Puschmann¹, Johannes Gerber³, Thomas Hummel¹. ¹Departments of Otorhinolaryngology, Dresden, Germany, ²Paediatrics, Dresden, Germany, ³Radiology, Dresden, Germany

26  #P268  Pregnancy and Olfactory Sensitivity
E. Leslie Cameron¹, Richard L. Doty². ¹Carthage College, Kenosha, WI, United States, ²Smell & Taste Center, University of Pennsylvania School of Medicine, Philadelphia, PA, United States

27  #P269  Beliefs About Health Effects From An Odor Alter Sniffing Of That Odor
Patricia Bulsing¹, Monique A Smeets², Tyler Lorig³. ¹Unilever, Vlaardingen, Netherlands, ²Utrecht University, Utrecht, Netherlands, ³Washington and Lee University, Lexington, VA, United States

28  #P270  Relationship between Odor Properties for Pleasant and Unpleasant Odors
Allana L. Goodman¹,², Jelena Djordjevic¹,². ¹Montreal Neurological Institute, Montreal, QC, Canada, ²McGill University, Montreal, QC, Canada

29  #P271  Slight Variations in Components Ratio affect Odor Pleasantness of a Blending Mixture
Elodie Le Berre¹,², Noëlle Béno¹, Gérard Coureaud², Patrick Etiévant¹, Thierry Thomas-Danguin¹. ¹Flaveur Vision et Comportement du Consommateur, INRA-ENESAD-UB, Dijon, France, ²Centre Européen des Sciences du Goût, CNRS-UB-INRA, Dijon, France, ³current address: Unilever Food and Health Research Institute, Vlaardingen, Netherlands

30  #P272  Identification of odorants induced by stress and deception in humans
George Preti¹,², Jae Kwak¹, Christopher Maute¹, Pamela Dalton¹. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Department of Dermatology, School of Medicine, University of Pennsylvania, Philadelphia, PA, United States
31 #P273 The Recognition Point in Odor Detection
*University of California, San Diego, La Jolla, CA, United States*

32 #P274 Time encoded in smell
Kinneret Weissler¹, Shulamith Kreitler¹, Noam Sobel². 
¹Department Of Psychology, Tel-Aviv University, Tel-Aviv, Israel, ²Department Of Neurobiology, Weizmann Institute of Science, Rehovot, Israel

33 #P275 A view of the world through the nose
Lee Sela, Aharon Weissbrod, Elad Schneidman, Noam Sobel. 
Weizmann institute of science, Rehovot, Israel

34 #P276 Wnt5a has stage and location specific effects in embryonic tongue epithelium and mesenchyme
Charlotte M. Mistretta ¹, Hong-Xiang Liu¹, Ann M. Staubach Grosse², Katherine D. Walton², Deborah L. Gumucio². 
¹School of Dentistry, University of Michigan, Ann Arbor, MI, United States, ²Medical School, University of Michigan, Ann Arbor, MI, United States

35 #P277 Odor Discrimination Is Influenced By Odor Naming Ability
Erica, J. Mannea¹, Robert, C. Gesteland³, Robert, A. Frank¹, Lloyd Hastings², Konstantin A. Rybalski¹, Jason, M. Bailie¹, Melinda, S. Brearton¹. ¹University of Cincinnati, Cincinnati, OH, United States, ²Osmic Enterprises, Cincinnati, OH, United States, ³CompuSniff, Cincinnati, OH, United States

36 #P278 Crossmodal interactions between odors and abstract symbols
Han-Seok Seo¹, Artin Arshamian¹², Kerstin Schemmer³, Ingeborg Scheer³, Thorsten Sander³, Guido Ritter³, Thomas Hummel¹. ¹Smell and Taste Clinic, University of Dresden Medical School, Dresden, Germany, ²Department of Psychology, Stockholm University, Stockholm, Sweden, ³Department of Home Economics and Nutrition Science, Münster University of Applied Sciences, Münster, Germany, ⁴Dasign GmbH, Darmstadt, Germany
37 #P279 How big is the gap between detection and recognition of aliphatic aldehydes?
Matthias Laska, Anna Ringh. Linkoping University, Linkoping, Sweden

38 #P280 Comparison of odor threshold for phenylethylalcohol and butanol
Franziska Krone, Kornelia Lange, Ilona Croy, Thomas Hummel. Dresden, Germany

39 #P281 Human Olfactory Detectability of Homologous 2-Ketones and n-Alkylbenzenes
J. Enrique Cometto-Muniz¹, Michael H. Abraham². ¹Chemosensory Perception Lab., Dept. of Surgery (Otolaryngology), University of California, San Diego, La Jolla, CA, United States, ²Department of Chemistry, University College London, London, United Kingdom

40 #P282 Cigarette Smoking and the Olfactory Detection of Cyanide
Jeneca J. Dovey, David E. Hornung. St. Lawrence University, Canton, NY, United States

41 #P283 Retronasal olfaction influences swallowing
Myriam Ebnoether¹, Antje Welge-Luessen¹, Markus Wolfensberger¹, Thomas Hummel². ¹Dept. of Otorhinolaryngology, University Hospital, Basel, Switzerland, ²Smell & Taste Clinic, University of Dresden Medical School, Dresden, Germany

42 #P284 Rapid plasticity in the olfactory system modulates detection threshold in an odorant-specific manner
Amy R. Gordon¹, Fredrik Åhs², Johan N. Lundstrom¹,³. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Department of Psychology, Uppsala University, Uppsala, Sweden, ³Department of Psychology, University of Pennsylvania, Philadelphia, PA, United States

43 #P285 Effects of sub-threshold odorants on rapid olfactory adaptation in human observers
Ryan R. Keith¹, Swati Pradeep¹, Erica M. Rodriguez¹, Katherine E. Boylan¹, Danielle A. Broome¹, Neal R. Delvadia¹, David W. Smith¹,². ¹Dept. of Psychology, University of Florida, Gainesville, FL, United States, ²University of Florida Center for Smell and Taste, Gainesville, FL, United States
44  #P286  Update on Racial and Gender Differences in Odor Perception
Charles J. Wysocki¹, Danielle R. Reed¹, Doron Lancet², Yehudit Hasin³, Jennifer Louie³, Lisa Oriolo³, Fujiko Duke¹. ¹Monell Chemical Senses Center, Philadelphia, PA, United States, ²Weizmann Institute of Science, Rehovot, Israel

45  #P287  Taste cell specific over-expression of BDNF leads to multiple fold increase of expression levels of BDNF and increased size and number of taste buds
Irina Nosrat¹, Shailaja Kishan Rao¹, Weikuan Gu¹, Robert Margolskee², Christopher Nosrat¹. ¹University of Tennessee Health Science Center, Memphis, TN, United States, ²Mount Sinai School Medicine, New York, NY, United States

46  #P288  Dreams and Smell - The Impact of Nocturnal Olfactory Stimulation on Dreams
Boris A. Stuck¹, Desislava Atanasova¹², Michael Schredl². ¹Department of Otorhinolaryngology, Head and Neck Surgery, Mannheim, Germany, ²Central Institute of Mental Health, Mannheim, Germany

47  #P289  Effects Of Septoplasty - A Pre-And Postoperative Study On Trigeminal Sensitivity And Olfactory Performance
Benno Schuster¹, Stefanie Schulze¹, Christian A. Mueller². ¹Smell & Taste Clinic, Dept. of ORL, University of Dresden Medical School, Dresden, Germany, ²Dept. of ORL, Medical University of Vienna, Vienna, Austria

48  #P290  Putative Human Pheromones Increase Women’s Observed Flirtatious Behaviors and Ratings of Attraction
James V. Kohl¹, Linda C. Kelahan², Heather Hoffmann². ¹Stone Independent Research, Inc., Phoenix, NY, United States, ²Knox College, Galesburg, IL, United States

49  #P291  Effects of Video Game Console and Snack Type on Snack Consumption During Play
Jonathan Kolks, Tim Wright, Bryan Raudenbush.  Wheeling Jesuit University, Wheeling, WV, United States
50 #P292 Effects of Peppermint Scent Administration on Increasing Nintendo Wii Guitar Hero Performance
Ryan Hunker, Tim Wright, Kristin McCombs, Laura Bruno, Bryan Raudenbush, Jonathan Kolks. Wheeling Jesuit University, Wheeling, WV, United States

51 #P293 Deposition of inhaled particles in the olfactory region in rat and human nasal cavities during breathing
Jianbo Jiang, Kai Zhao. Monell Chemical Senses Center, Philadelphia, PA, United States

52 #P294 The Effects of Orally Administered Capsaicin on Rat Taste Bud Volume and Papillae Morphology Throughout Development
Kaeli K Samson, Suzanne I Sollars. University of Nebraska Omaha, Omaha, NE, United States

53 #P295 Competitive Effects of GSP and IX Nerve Transection on the Maturation of CT Terminal Field Volume in the Nucleus of the Solitary Tract
Sara L Dudgeon, David L Hill. University of Virginia, Charlottesville, VA, United States

54 #P296 Postnatal development of trigeminal neuronal sensitivity to capsaicin, nicotine, and innocuous cooling
Jiang Xu1, Valery Audige2, Nancy Rawson1, Bruce Bryant1. 1Monell Chemical Senses Center, Philadelphia, PA, United States, 2University of Pennsylvania, Philadelphia, PA, United States, 3Wellgen, Inc., North Brunswick, NJ, United States

55 #P297 Development of the olfactory organ in fish: a comparison
Anne Hansen1, Peter Bartsch2, Eckart Zeiske3. 1University of Colorado, Denver, CO, United States, 2Humboldt University, Berlin, Germany, 3University of Hamburg, Hamburg, Germany
Sunday, April 26, 2009

7:30 - 11:00 am  REGISTRATION
Prefunction Area

7:30 - 9:00 am  CONTINENTAL BREAKFAST

8:00 - 10:05 am  SYMPOSIUM
GABA IN THE DEVELOPING OLFACTORY SYSTEM: FROM GENERATION TO DIFFERENTIATION
Chair/Organizer: Harriet Baker
South Ballroom

8:00  #59  GABA in the developing olfactory system: from generation to differentiation
Harriet Baker\textsuperscript{1,2}. \textsuperscript{1}Weill, Cornell Med. Coll., White Plains, NY, United States, \textsuperscript{2}Burke Med. Res. Inst, White Plains, NY, United States

8:01  #60  GABA differentially modulations migration of SVZ progenitor subpopulations
Adam C Puche. University of Maryland, Baltimore, MD, United States

8:25  #61  GABA and glutamate interplay on subventricular zone cell production
Angeline Bordey. Yale Univ Sch Med, New Haven, CT, United States

8:50  #62  GABA-enhanced differentiation of the olfactory bulb dopaminergic phenotype
John W Cave\textsuperscript{1,2}, Yosuke Akiba\textsuperscript{2}, Harriet Baker\textsuperscript{1,2}. \textsuperscript{1}Weill Cornell Medical College, New York, NY, United States, \textsuperscript{2}Burke Medical Research Institute, White Plains, NY, United States

9:15  #63  Dynamic development of synaptic inputs on maturing interneurons in the adult OB
Pierre-Marie Lledo, Antoine Nissant, Cedric Bardy, Hiro Katagiri, Kerren Murray. Institut Pasteur, Paris, France
Transsynaptic Tracing Studies Suggest Combinatorial Gating of Olfactory Information is Mediated by GABAergic Interneurons in the Granule Cell Layer
David H Kim¹, Andrew Y Chang¹, Matthew E Phillips¹, Aurelie Palais¹, Hetal K Patel¹, Janna C Nawrot², Katherine T Nguyen¹, Michele Migliore¹,³, Gordon M Shepherd¹, David C Willhite¹. ¹Yale University, New Haven, CT, United States, ²California Institute of Technology, Pasadena, CA, United States, ³National Research Council, Institute of Biophysics, Palermo, Italy

10:05 - 10:30 am
BREAK
Prefunction Area

10:30 am - 12:30 pm
PLATFORM PRESENTATIONS
OLFAC TORY AND VOMERONASAL SYSTEMS
South Ballroom

10:30 #65
Repertoire of chemosensory receptors from the genome of the jawless vertebrate Petromyzon marinus
Scot V. Libants¹, Kevin Carr², John H. Teeter¹, Yu-wen Chung-Davidson¹, Curt Wilkerson², Weiming Li¹. ¹Department of Fisheries and Wildlife, Michigan State University, East Lansing, MI, United States, ²Research Technology Support Facility, Michigan State University, East Lansing, MI, United States, ³The Monell Chemical Sense Center, Philadelphia, PA, United States

10:45 #66
Emx2 Stimulates Odorant Receptor Gene Expression and Controls OSN Axon Growth
Jeremy C. McIntyre, Soma C. Bose, Timothy S. McClintock. Department of Physiology, University of Kentucky, Lexington, KY, United States

11:00 #67
Investigations of Olfactory Receptor Internalizations
Sebastian Rasche, Anastasia Mashukova, Hanns Hatt, Eva M. Neuhaus. Ruhr-University, Bochum, Germany

11:15 #68
OMP Deletion Alters Functional Maturation of Single Olfactory Sensory Neurons
Anderson C Lee, Minghong Ma. Department of Neuroscience, University of Pennsylvania School of Medicine, Philadelphia, PA, United States
11:30 #69 Sensory Adaptation in the Vomeronasal Organ
Frank Zufall¹, Silke Hagendorf², Jan Weiss¹, Marc Spehr²,
Trese Leinders-Zufall¹, Jennifer Spehr². ¹Dept. Physiology,
University of Saarland, School of Medicine, Homburg,
Germany, ²Dept. Cellular Physiology, Ruhr-University of
Bochum, Bochum, Germany

11:45 #70 First Order Blend Processing in the Moth Antennal Lobe
Linda S. Kuebler, Shannon B. Olsson, Bill S. Hansson.
Department of Evolutionary Neuroethology, Max Planck
Institute For Chemical Ecology, Jena, Germany

12:00 #71 Translation of Olfactory Input into Behavioral Output in
the Drosophila Larva
Shelby A. Montague¹,², Dennis Mathew², John R. Carlson².
¹Department of Cellular and Molecular Physiology,
Yale University, New Haven, CT, United States, ²Department
of Molecular, Cellular, and Developmental Biology,
Yale University, New Haven, CT, United States

12:15 #72 Evidence for a chemosignal in human tears
Shani Gelstein¹, Liron Rozenkranz¹, Yaara Yeshurun¹,
Yehuda Roth², Noam Sobel¹. ¹Weizmann Institute of Science,
Rehovot, Israel, ²ENT Wolfson Medical Center, Holon, Israel
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**POSTER SESSION VII: CHEMOSENSORY PSYCHOPHYSICS II**

**North Ballroom**

1. **#P298**
   - **The influence of suprathreshold gustatory stimuli on resting respiration in humans**
   - Thomas Bitter, Maria Lätzel, Hilmar Gudziol. *University Hospital of the University of Jena, Jena, Germany*

2. **#P299**
   - **Selective Inhibition of Taste in Humans by Cathodal Current**
   - Thomas P. Hettinger, Ricardo Abakah, Marion E. Frank. *UCONN Health Center, Farmington, CT, United States*

3. **#P300**
   - **Rare Subjects with the TAS2R38 AVI/AVI “Non-Taster” Diplototype Perceive Propylthiouracil as Bitter: The Quest for the Rescue**
   - Suzie Alarcon, Nelsa Estrela, Anilet Tharp, James Bernhardt, Kathryn Luley, Paul A. S. Breslin. *Monell Chemical Senses Center, Philadelphia, PA, United States*

4. **#P301**
   - **Examination of PROP Taste Recognition Thresholds and Suprathresholds with Edible Taste Strips**
   - Hetvi Desai¹, Sahbina Ebba¹, Gregory Smutzer¹². ¹*Biology Department, Temple University, Philadelphia, PA, United States, ²Smell and Taste Center, University of Pennsylvania, Philadelphia, PA, United States*

5. **#P302**
   - **B6 mice display confusion in behaviorally discriminating between quinine and citric acid**
   - Yada Treesukosol, Clare M Mathes, Alan C Spector. *Florida State University, Tallahassee, FL, United States*

6. **#P303**
   - **Non synomymous SNPs in human tas1r1, tas1r3, mGluR1 and individual taste sensitivity to glutamate**
   - Mariam Raliou¹², Anna Wiencis², Anne-Marie Pillias¹, Aurore Planchais¹, Corinne Eloit¹³, Yves Boucher¹, Didier Trotier¹, Jean-Pierre Montmayeur², Annick Faurion¹. ¹*NBS-NOPA, INRA, Jony-en-Josas, France, ²CESG-CNRS, Dijon, France, ³Dept ORL Hôpital Lariboisière, Paris, France, ⁴Faculté Dentaire, UFR Ondotologie, Paris, France*
7  #P304  Understanding the Relationship Between Saltiness and Umami

8  #P305  Perceptual variation in umami taste and polymorphisms in *TAS1R* taste receptor genes
Qing-Ying Chen¹, Suzie Alarcon¹, Anilet Tharp¹, Tiffani A. Greene², Joseph Rucker², Paul A.S. Breslin¹. ¹*Monell Chemical Senses Center, Philadelphia, PA, United States, ²Integral Molecular Inc., Philadelphia, PA, United States*

9  #P306  Monosodium Glutamate Taste Recognition Thresholds are not Affected by Modulation of Serotonin or Noradrenaline Levels in Healthy Humans
Lucy F Donaldson, Tom P Heath, Ben Feakins, Nathan Jones, Charlotte Kenyan, Shyamal Raichura, Emma Richardson, Leila Rooshenas, Vicoria Smith, Jan K Melichar. *University of Bristol, Bristol, United Kingdom*

10  #P307  A receptor focused analysis of experience induced changes in glucose and monosodium glutamate (MSG) taste sensitivity
Kristina M Gonzalez, Alison N Le, Todd P Livdahl, Linda M Kennedy. *Clark University, Worcester, MA, United States*

11  #P308  The Effect of Amiloride on the Taste Quality of Salty Solutions
Kathryn Luley, Anilet Tharp, James Bernhardt, Paul A. S. Breslin. *Monell Chemical Senses Center, Philadelphia, PA, United States*

12  #P309  Synchronicity Judgment of Gustation and Olfaction
Tatsu Kobayakawa, Hideki Toda, Naomi Gotow. *Advanced Industrial Science and Technology (AIST), Tsukuba, Japan*

13  #P310  The Effect of pH on Arginine Enhancement of Salty Taste
Nelsa Estrella, Paul A. S. Breslin. *Monell Chemical Senses Center, Philadelphia, PA, United States*
14  #P311  Synergistic responses to L-glutamine and IMP in brief access preference testing in C57BL mice
Benjamin K. Eschle, Meghan C. Eddy, J. Tyler Van Backer, Eugene R. Delay. Department of Biology & Vermont Chemical Senses Group, University of Vermont, Burlington, VT, United States

15  #P312  Taste Recognition Thresholds for Human Sweet Taste Function
Sahbina A. Ebba¹, Bradford Speck¹, Lloyd Hastings², Gregory Smutzer¹,³. ¹Biology Department, Temple University, Philadelphia, PA, United States, ²Osmic Enterprises, Inc., Cincinnati, OH, United States, ³Smell & Taste Center, University of Pennsylvania School of Medicine, Philadelphia, PA, United States

16  #P313  Sweetness Resists Suppression in Complex Mixtures
Juyun Lim¹, Floor Oosterhoff ², Barry Green²,³. ¹Oregon State University, Corvallis, OR, United States, ²The John B. Pierce Laboratory, New Haven, CT, United States, ³Yale School of Medicine, New Haven, CT, United States

17  #P314  Sucroseoctaacetate aversion: preliminary evaluation of MSM consomic mouse strains for gene-mapping
David A Blizard¹, Tsuyoshi Koide², Toshihiko Shiroishi², Thomas P Hettinger³, Marion E Frank³, Ayako Ishii². ¹Pennsylvania State University, University Park, PA, United States, ²National Institute of Genetics, Mishima, Japan, ³University of Connecticut Health Center, Farmington, CT, United States

18  #P315  Measurements of stimulus preference vs. stimulus pleasantness give rise to different optimally liked concentrations of sucrose
Kristin J Rudenga¹, Wambura Fobbs¹, Dana M Small¹,². ¹Yale University, New Haven, CT, United States, ²John B Pierce Laboratory, New Haven, CT, United States

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19 #P316 Taste damage associated with otitis media
Linda M. Bartoshuk¹, Frank A. Catalanotto¹, Valerie B. Duffy², Miriam Grushka¹, Vicki D. Mayo¹, Monica C. Skarulis³, Derek J. Snyder¹,⁴. ¹University of Florida Center for Smell and Taste, Gainesville, FL, United States, ²University of Connecticut, Storrs, CT, United States, ³National Institutes of Health, Bethesda, MD, United States, ⁴Yale University, New Haven, CT, United States

20 #P317 Otitis Media and intensification of non-taste oral sensations
Frank A Catalanotto¹,², Eric T Broe¹, Linda M Bartoshuk¹,², Vicki D Mayo¹,², Derek J Snyder¹,². ¹University of Florida College of Dentistry, Department of Community Dentistry and Behavioral Science, Gainesville, FL, United States, ²Center for Smell and Taste, Gainesville, FL, United States

21 #P318 Oral irritation elicited by menthol and cinnamaldehyde (CA): self- and cross-desensitization
E. Carstens, Mirela Iodi Carstens, Karen Zanotto. University of California, Davis, Davis, CA, United States

22 #P319 Evidence that repeated threshold testing can alter the perceived intensity of taste
Barry Green¹,², Juyun Lim³. ¹The John B. Pierce Laboratory, New Haven, CT, United States, ²Dept. of Surgery (Otolaryngology), Yale University School of Medicine, New Haven, CT, United States, ³Dept. of Food Science and Technology, Oregon State University, Corvallis, OR, United States

23 #P320 Recognizing Taste Stimuli below the Detection Threshold
Timothy G. Shepard¹, Miao-Fen Wang¹,², Maria G. Veldhuizen¹,², Lawrence E. Marks¹,². ¹John B. Pierce Laboratory, New Haven, CT, United States, ²Yale University School of Medicine, New Haven, CT, United States

24 #P321 Comparing the Distributions of human TAS2R38 taste receptor Genotypes in Philadelphia and in Southern Finland
Mari A Sandell¹,², Sailsa KE Mattila¹, Suzanne M Alarcon², Paul AS Breslin². ¹University of Turku, Turku, Finland, ²Monell Chemical Senses Center, Philadelphia, PA, United States

25 #P322 Development of Multichannel Taste Stimulator System
Hideki Toda, Tatsu Kobayakawa. National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan
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# AChemS Program 2009

## program at a glance

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<td>Gustation 8:00 - 10:00 AM SOUTH BALLROOM</td>
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<td>POSTER SESSION I: Chemosensory disorders, models and aging/Central chemosensory circuits 8:00 AM - 12:30 PM NORTH BALLROOM</td>
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<td>8:45 am</td>
<td>Gender effects on olfactory processing 10:30 AM - 12:30 PM SOUTH BALLROOM</td>
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<td>9:00 am</td>
<td>Development and Plasticity: First Central Chemosensory Relays 8:00 AM - 10:30 AM SOUTH BALLROOM</td>
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<td>POSTER SESSION III: Cortical chemosensory processing/Receptor genomics and molecular biology 8:00 AM - 12:30 PM NORTH BALLROOM</td>
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<td>Polak Young Investigator Award Winners 11:00 AM - 12:30 PM SOUTH BALLROOM</td>
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<td>12:00 pm</td>
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<td>Welcome Banquet (Ticketed Event)</td>
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<td>IFF Special Lecture 7:00 AM - 8:15 PM SOUTH BALLROOM</td>
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<td>Reciprocal interactions between primary taste and olfactory processing networks and higher cognition 8:15 AM - 10:15 PM SOUTH BALLROOM</td>
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<td>Industry Symposium 1:00 AM - 4:00 PM SOUTH BALLROOM</td>
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<td>10:15 am</td>
<td>ChEMa Business Meeting 12:45 AM - 2:45 PM SOUTH BALLROOM</td>
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<td>11:00 am</td>
<td>Workshop: NIH 3:00 AM - 4:00 PM FLORIDA ROOM</td>
</tr>
<tr>
<td>12:00 pm</td>
<td>ChEMa Social (Ticketed Event)</td>
</tr>
<tr>
<td>12:15 pm</td>
<td>President Symposium: On beyond glomeruli 7:00 AM - 9:05 PM SOUTH BALLROOM</td>
</tr>
<tr>
<td>12:30 pm</td>
<td>POSTER SESSION II: Chemosensory response to, and control of, feeding/Neuroethology 7:00 AM - 11:00 PM NORTH BALLROOM</td>
</tr>
<tr>
<td>12:45 pm</td>
<td>IFF Special Lecture 7:00 AM - 8:15 PM SOUTH BALLROOM</td>
</tr>
<tr>
<td>2:10 pm</td>
<td>Reciprocal interactions between primary taste and olfactory processing networks and higher cognition 8:15 AM - 10:15 PM SOUTH BALLROOM</td>
</tr>
</tbody>
</table>

### Friday, April 24

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am</td>
<td>Registration</td>
</tr>
<tr>
<td>8:15 am</td>
<td>Industry Reception (Ticketed Event)</td>
</tr>
<tr>
<td>9:00 am</td>
<td>Givadaun Lecture 9:00 AM - 10:00 AM SOUTH BALLROOM</td>
</tr>
<tr>
<td>9:15 am</td>
<td>POSTER SESSION IV: Chemosensory transduction and perireceptor events 7:00 AM - 11:00 PM NORTH BALLROOM</td>
</tr>
<tr>
<td>10:15 am</td>
<td>POSTER SESSION III: Cortical chemosensory processing/Receptor genomics and molecular biology 8:00 AM - 12:30 PM NORTH BALLROOM</td>
</tr>
<tr>
<td>11:00 am</td>
<td>Polak Young Investigator Award Winners 11:00 AM - 12:30 PM SOUTH BALLROOM</td>
</tr>
<tr>
<td>12:00 pm</td>
<td>AChemS Business Meeting 12:45 AM - 2:45 PM SOUTH BALLROOM</td>
</tr>
<tr>
<td>12:15 pm</td>
<td>Workshop: NIH 3:00 AM - 4:00 PM FLORIDA ROOM</td>
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**Registration**

- 3:30 pm to 8:00 pm
- 7:00 am to 1:00 pm, 6:30 pm to 7:30 pm
- 7:30 am to 1:00 pm, 6:30 pm to 7:30 pm
**Program at a Glance**

### SATURDAY, APRIL 25

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 am</td>
<td>Registration</td>
</tr>
<tr>
<td>9:00 am</td>
<td>Workshop: Computational problems in sequential stages of odor processing 3:00 - 5:30 PM SOUTH BALLROOM</td>
</tr>
<tr>
<td>9:00 am</td>
<td>GABA in the developing olfactory system: From generation to differentiation 8:00 - 10:05 AM SOUTH BALLROOM</td>
</tr>
<tr>
<td>10:05 am</td>
<td>Break 10:05 - 10:30 AM</td>
</tr>
<tr>
<td>10:30 am</td>
<td>Making sense of fat taste 10:30 AM - 12:30 PM SOUTH BALLROOM</td>
</tr>
<tr>
<td>12:45 pm</td>
<td>Clinical Luncheon (Ticketed Event) 12:45 - 2:45 PM THE KEYS ROOM</td>
</tr>
<tr>
<td>1:00 pm</td>
<td>POSTER SESSION V: Chemosensory memory/ Central synaptic physiology/ Neurogenesis 8:00 AM - 12:30 PM NORTH BALLROOM</td>
</tr>
<tr>
<td>1:05 pm</td>
<td>Break 10:05 - 10:30 AM</td>
</tr>
<tr>
<td>1:30 pm</td>
<td>Olfactory and Vomeronasal Systems 10:30 AM - 12:30 PM SOUTH BALLROOM</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>Follow the head, not only the nose: Top-down influences on olfactory perception 7:00 - 9:05 PM SOUTH BALLROOM</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>POSTER SESSION VI: Chemosensory development and Psychophysics I 7:00 - 11:00 PM NORTH BALLROOM</td>
</tr>
<tr>
<td>5:00 pm</td>
<td>POSTER SESSION VII: Chemosensory Psychophysics II 8:00 AM - 12:30 PM NORTH BALLROOM</td>
</tr>
<tr>
<td>7:00 pm</td>
<td>Break 10:05 - 10:30 AM</td>
</tr>
</tbody>
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### SUNDAY, APRIL 26

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<tr>
<td>7:30 am</td>
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<tr>
<td>8:00 am</td>
<td>POSTER SESSION VII: Chemosensory Psychophysics II 8:00 AM - 12:30 PM NORTH BALLROOM</td>
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<tr>
<td>9:00 am</td>
<td>Break 10:05 - 10:30 AM</td>
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Program at a Glance | 101
See you next year at our new venue!

Tradewinds Resort | St. Petersburg, Florida

AChemS 32nd Annual Meeting
April 21-25, 2010

More space, more rooms, more fun!
We congratulate Dr. Carla Shatz for her significant contributions to the understanding of neuronal circuitry regulation and plasticity, and thank her for her outstanding lecture.

www.givaudan.com