

List of Abstracts from the 15th International Symposium on Olfaction and Taste

The full content of these abstracts is available online at www.chemse.oxfordjournals.org.

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Wolfgang Meyerhof

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Anne Brunet, Eric L. Greer, Max R. Banko

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Charles Greer

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Basic Processes in Human Olfactory Cognition

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Symposium: Nasal Trigeminal Function: Quantitative, Qualitative and Temporal Effects

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What Can Pathology Tell us About Physiology?

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Anna E. Voznesenskaia and A.N. Severtzov

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Steven Chang, Yu-Wen Chung-Davidson, Mara B. Bryan, Christopher B. Rees and Weiming Li

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Hiroshi Ueda

Changes in Expression of *Soig* and Odorant Receptor Genes in Olfactory Epithelium During Olfactory Imprinting and Homing Migration in Salmon

Hiroshi Hino, Fumi Morinishi and Hiroshi Ueda

Emx2 Regulates Odorant Receptor Choice in Vertebrates

Tyler Cutforth

Stochastic Protocadherin Gene Expression Diversifies Olfactory Neurons

Kristin Baldwin, Brett Fields, Susan Tate and Sulagna Ghosh

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Robert P. Lane, Nidhi Pathak, Paul Johnson and Mike Getman

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Joerg Strotmann, Yong-Quan Zhang and Heinz Breer

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Minh Nguyen and Nick Ryba

Positive Selection Shapes the Function of an Odorant Receptor for Sex-Steroid Derived Odors in Primates

Hanyi Zhuang and Hiroaki Matsunami

Activity-Dependent Elimination of the Olfactory Sensory Neurons Expressing Multiple Odorant Receptors

Huikai Tian and Minghong Ma

Phenotypic Plasticity in Expression of Chemoreceptor Genes in *Drosophila Melanogaster*

Shanshan Zhou, Christina Grozinger, Trudy F.C. Mackay and Robert R.H. Anholt

Manipulation of Odorant Receptor Expression in Olfactory Sensory Neurons

Huaiyang Chen and Qizhi Gong

Proximal Promoter Contribution to Patterned or Expression

Carey E. Connelly and Randall R. Reed

Unconscious Perceptual and Affective Processing of Odors in Anosmia Due to Right Orbitofrontal Injury

Wen Li, Leonardo Lopez, James Howard and Jay Gottfried

Functional Role of $\alpha 7$ -Nicotinic Acetylcholine Receptors in Mouse Models of Schizophrenia

Jennifer L. Hellier, Nicole L. Arevalo, Catherine E. Adams and Diego Restrepo

Anosmia as Early Predictor of Parkinson Disease: Tyrosine Hydroxylase Immunoreactivity in the Human Olfactory Bulb and Anterior Olfactory Nucleus

Isabel Ubeda-Banon, Daniel Saiz-Sanchez, Carlos de la Rosa-Prieto, Susana Garcia-Munozguren, Lucia Argandona-Palacios and Alino Martinez-Marcos

Advanced Time-Series Analysis of MEG Data as a Method to Explore Olfactory Function in Healthy Controls and Parkinson's Disease Patients

Sanne Boesveldt, Cornelis J. Stam, Dirk L. Knol, Jeroen P.A. Verbunt and Henk W. Berendse

Difference in fMRI Olfactory Activation Patterns in Elderly Subjects with High and Low Task Performance

Barbara Cerf-Ducastel, Léri Morin-Audebrand, Lori Haase, Claire Sulmont-Rosse, Sylvie Issanchou, Claire Murphy and Jean-Pierre Royet

Association Between fMRI Brain Activation and Neuropsychological Performance in Individuals at Risk for Alzheimer's Disease

Lori Haase, Mi Ran Wang and Claire Murphy

Relationship of Olfactory and Neurocognitive Deficit in Alzheimer's Disease

Jianli Wang, Paul E. Eslinger, Richard L. Doty, Erin K. Zimmerman, Robert Grunfeld, Xiaoyu Sun, Jeffrey Vesek, James R. Connor, Michael B. Smith and Qing X. Yang

Relationship of Functional Activation Deficit and Anatomical Atrophy in the Primary Olfactory Cortex and Hippocampus of Alzheimer's Disease

Jianzhong Yin, Jianli Wang, Paul J. Eslinger, Lindsay DeArment, Erin K. Zimmerman, Robert Grunfeld, Jeffrey Vesek, Michael B. Smith, Ji Qi, James R. Connor and Qing X. Yang

Olfactory Imaging Probes of Limbic Dysfunction in Alzheimer's Disease

James D. Howard, Wen Li and Jay A. Gottfried

ENaC Expression in Primate Taste Bud Cell Types

Min Lu, Na Gao, Fernando Echeverri, Bianca Laita, Dalia Kalabat and Bryan D. Moyer

Maillard Reacted Peptides (MRPs) Modulate Human Salt Taste and the Amiloride-Insensitive Salt Taste Receptor

Tadayoshi Katsumata, Hiroko Nakakuki, Chikara Tokunaga, Noboru Fujii, Macoto Egi, Tam-Hao T. Phan, Shobha Mummalaneni, John A. DeSimone and Vijay Lyall

The Taste System can Discriminate Mixtures of Water Dissolved Minerals Varying on Cations Proportion

Sabine Puget, Myriam Peignet, Yoann Curé, Nöelle Béno, Elisabeth Guichard, Philippe Piriou and Thierry Thomas-Danguin

Organic Salts, Organic Acids, and Benzamil Differentially Modulate The Responses of Rat Geniculate Ganglion Neurons to Salt

Joseph M. Breza and Contreras J. Robert

Sodium Depletion Alters Amiloride-Sensitive Salt Taste in Humans

George M. Feldman, Gerard L. Heck and Nancy L. Smith

NaCl Dominates Hamster Taste Responses to Electrolyte Mixtures

Bradley K. Formaker, Thomas P. Hettinger and Marion E. Frank

Electrophysiological Responses of the Chorda Tympani Nerve Following 24-H Dietary Sodium Deprivation

Joanne M. Garcia and Robert J. Contreras

Sodium-Deficiency Induced by Spironolactone Elicits Discriminative Ability for Hypotonic Salty Solutions in C57Bl/6 Mice

Takayuki Kawai, Tetsuya Ookura and Yuko Kusakabe

Chemical Specificity of Rodent Geniculate Ganglion Neurons Characterized by their Responses to KCl and Citric Acid

Alexandre A. Nikonov, Joseph M. Breza and Robert J. Contreras

Mechanisms of Sea Hare Ink as a Feeding Deterrent Against Predatory Fish

Matthew Nusnbaum, Arman Sheybani, Michiya K. Kamio, Robyn Van Dam, John Caprio and Charles D. Derby

Hydrogen Peroxide and other Components in the Ink of Sea Hares are Chemical Defenses Against Predatory Spiny Lobsters Acting Through Non-Antennular Chemoreceptors

Juan F. Aggio and Charles D. Derby

Evidence that Planktivorous Fishes Aggregate to Dimethylsulfoniopropionate (DMSP)

Jennifer L. DeBose, Sean C. Lema and Gabrielle A. Nevitt

The Sensory Basis for Ecological Paradigms on Wave-Swept Shores

Richard K. Zimmer, Graham A. Ferrier and Cheryl Ann Zimmer

Investigating Olfactory Foraging in Wandering Albatross (*Diomedea Exulans*) Using a Global Positioning System (GPS)

Marcel Losekoot, Gabrielle A. Nevitt and Henri Weimerskirch

Chemical Cues and the Keystone Species Hypothesis

Graham A. Ferrier, Cheryl Ann Zimmer and Richard K. Zimmer

Isolation of a Candidate Receptor that Responds to a Chemical Defense Compound

Staci P. Cohen, Gwyneth E. Halstead-Nussloch, Julia Kubanek and Nael A. McCarty

Toxic Fruit Tunes Fly Smell

Teun Dekker, Irene Ibba, Anna-Maria Angioy and Bill S Hansson

Sexual Dimorphism and Seasonal Variation in the Harderian Gland of the Red-Sided Garter Snake

Robert T. Mason, Sten M. Erickson and Mimi Halpern

The Identification of Attractive Volatiles in Aged Male Mouse Urine

Kazumi Osada, Takuya Tashiro, Kenji Mori and Hiroshi Izumi

Urinary Volatile Biomarkers in Mouse Models of Lung Cancer

Koichi Matsumura, Maryanne Opiekun, Hiroaki Oka, Steven M. Albelda, Kunio Yamazaki and Gary K. Beauchamp

Olfactory Phenotypes of BBS8-Null Mice

Abigail L. Davidson and Randall R. Reed

Molecular Mechanism of NCX Regulation Via Dynamic Interactions of CAM, OMP and Bex in Olfactory Sensory Neurons

Hyun J. Kwon, Jae H. Koo, Joyce W. Margolis and Frank L. Margolis

A Physiological Role for Nasal MUPS in Chemical Communication

Michele L. Schaefer, Heather M. Kulaga and Randall R. Reed

Expression of Proton Sensors in Olfactory Tissue

Taufiquel Huque, Karen Yee, Jiang Xu and Joseph G. Brand

Expression of Connexin 57 in the Olfactory System in Mice

Chunbo Zhang

Calcium Store-Mediated Signaling in Sustentacular Cells of the Neonatal Mouse Olfactory Epithelium

Colleen C. Hegg, Mavis Irwin and Mary T. Lucero

Calcium Clearance from Olfactory Sensory Neurons - The Significance of PMCA5

Samsudeen Ponissery Saidu, Shyamal D. Weeraratne, Megan S. Valentine, Rona J. Delay and Judith L. Van Houten

Calcium Microdomains in the Chemosensory Cilia of Olfactory Receptor Neurons

Karen Castillo, Juan Bacigalupo and Diego Restrepo

Omp Deletion Alters Functional Maturation of Olfactory Sensory Neurons Revealed by Patch Clamp Recordings

Anderson C. Lee and Minghong Ma

Olfactory Marker Protein (OMP) is a Novel Modulator of Ca²⁺ Efflux in Olfactory Sensory Neurons (OSN)

Paul F. Kent, Steven L. Youngenotb and Frank L. Margolis

Molecular Cloning and Molecular Histochemistry of Salmon Olfactory Marker Protein in the Lacustrine Sockeye Salmon (*Oncorhynchus Nerka*)

Hideaki Kudo, Yoshiaki Doi, Hiroshi Ueda and Masahide Kaeriyama

Possible Mechanism of Olfactory Sensitivity to Calcium in the Goldfish (*Carassius Auratus*)

Peter C. Hubbard and Adelino V.M. Canário

Origins of Variability in Olfactory Perception

Andreas Keller, Iran Gomez, Peggy Hempstead, Avery N. Gilbert and Leslie B. Vosshall

Influence of Visual Information and Test Paradigm on Clinical Olfactory Test Results

Masayoshi Kobayashi, Kohei Nishida, Masako Kitano-Ishikawa, Hitomi Ogihara and Yuichi Majima

Decline in Odor Memory and Odor Identification Performance Across the Adult Lifespan

Erica J. Mannea, Jason M. Bailie, Konstantin A. Rybalsky, Lloyd Hastings, Melinda S. Brearton, Blair Knauf, Robert C. Gesteland and Robert A. Frank

Predictors of Prognosis in Patients with Olfactory Disturbance

Behnam Nabet, Richard L. Doty, Andrew R. Fisher, Brigitte White and Mary D. Sammel

Men Grasp Odors Better than Women Do

Federico Tubaldi, Caterina Ansuini, Roberto Tirindelli and Umberto Castiello

Estrogen Replacement Therapy Induces Functional Asymmetry on an Odor Memory/Discrimination Test

Richard L. Doty, Mehreen Kismet and Isabelle Tourbier

The Effect of Response Alternatives on Odor Naming and Recall

Melinda S. Brearton, Nakulan Balasubramaniam, Briana Wallace, Erica J. Mannea, Konstantin A. Rybalsky, Jason M. Bailie, Blair Knauf, Lloyd Hastings and Robert A. Frank

Influence of Encoding and Retrieval Support on Odor Recognition Memory

Konstantin A. Rybalsky, Melinda S. Brearton, Erica Mannea, Blair Knauf, Jason M. Bailie and Robert A. Frank

Impact of Olfactory Loss on Behaviors Associated with Eating, Food Purchasing, and Cooking

Han-Seok Seo, Cornelia Hummel, Dorothee Buschhueter, Benno Schuster, Heike Hoffmann, Stefanie Schulze and Thomas Hummel

Effects of Peppermint Scent Inhalation on Appetite Control and Caloric Intake

Bryan Raudenbush, J. Alex Reed, Jude Almeida and Ben Wershing

Using Odors to Treat Sleep Apnea: A Test of Feasibility

Noam Sobel, Anat Arzi*, Lee Sela*, Amit Green and Yaron Dagan

Modulation of the Voltage-Gated Potassium Channel, Kv1.3, by the Adaptor Proteins Grb10 and Nshc in the Olfactory Bulb

Melissa A. Cavallin, Beverly S. Colley, K.C. Biju and Debra A. Fadool

A Computationally Faster Mitral Cell Model

Thomas S. McTavish and Diego Restrepo

Intrinsic Conductances Actively Shape Excitatory and Inhibitory Postsynaptic Responses in Olfactory Bulb External Tufted Cells

Michael T. Shipley and Shaolin Liu

Spatio-Temporal Activity of Neurons in the Insect Antennal Lobe: A Data Driven Computational Model

Matthieu Dacher, Sharon M. Crook and Brian H. Smith

Local Circuit Interactions within Olfactory Bulb Glomeruli Generate all-or-None Mitral Cell Network Activation

David H. Gire, Wilder Doucette, Diego Restrepo and Nathan E. Schoppa

Intrabulbar Projection Neurons Modulate Olfactory Bulb Output

Zhishang Zhou and Leonardo Belluscio

Computational Investigation of the Interaction Between Synaptic Adaptation and Potentiation in Olfactory Cortex

Christiane Linster and Donald A. Wilson

Odorant-Evoked Glomerular Activity Patterns Indicate that Mice are not Small Rats

Michael Leon, Zhe Xu, Sameera S. Ali and Brett A. Johnson

The Addition of GFP-Labeled Glomeruli as Fiducial Markers in a 3D Model of the Mouse Main Olfactory Bulb

Ernesto Salcedo, Eugene Kronberg, Tuan Tran, Xuan Ly, Kyle Hanson and Diego Restrepo

Poster Session II: Wed. July 23**Dipeptide Sweetener Interaction with the Sweet Receptor**

Marianna Max, Emeline L. Maillat, Meng Cui, Roman Osman and Fariba Assadi-Porter

Using the Human Sweet Taste Receptor to Discover Sweet Enhancers

Guy Servant, Catherine Tachdjian, Xiaodong Li, Tanya Ditschun, Poonit Kamdar, Adam Rivadeneyra, Feng Zhang, Xiao-Qing Tang, Qing Chen, Hong Zhang, Antoniette Java and Nicole Gonsalves

Neoculin, a Sweet Protein with Taste-Modifying Activity, and its Binding Site in Human T1R2-T1R3

Ayako Koizumi, Ken-ichiro Nakajima, Tohru Terada, Tomiko Asakura, Takumi Misaka and Keiko Abe

Isovanillic Sweeteners Interact with a Different Site of the Sweet Taste Receptor than the Structurally Related Compound Neohesperidin Dihydrochalcone

Gabriella Morini, Marcel Winnig, Bernd Bufe, Angela Bassoli, Gigliola Borgonovo and Wolfgang Meyerhof

Structure-Function Studies on MNEI: What Makes Monellin Sweet?

Catherine Royle, Jeanette R. Hobbs, Stephan Vigues, Steven D. Munger and Graeme L. Conn

Interaction Between Triterpene Glycoside and Sweet Taste Receptor hT1R2+hT1R3

Keisuke Sanematsu, Noriatsu Shigemura, Toshiaki Imoto and Yuzo Ninomiya

Probing the Sweet Receptor's Transmembrane Domain Ligand Binding Pocket with Lactisole Analogs

Yi Xia, Meng Cui, Roman Osman, Robert F. Margolskee and Marianna Max

Molecular Mechanism of Senomyx Sweet Taste Enhancers

Feng Zhang, Haitian Liu and Xiaodong Li

Candidate Sugar Receptors of *Aedes Aegypti* and their Evolution in Other Insects

Lauren B. Kent and Hugh M. Robertson

Follistatin Directs Patterning and Development of Sox2-Expressing Taste Bud Progenitors

Piper L.W. Hollenbeck, Crestina Beites, Joon Kim, Robin Lovell-Badge and Anne L. Calof

Developmental Alterations of *BDNF*, *Ntf5* and *TRKB* Expression in the Mouse Peripheral Taste System

Tao Huang and Robin F. Krimm

Epithelium-Derived and Neurotrophic Factors Promote Genuiculate Neurite Outgrowth Postnatally

Natalia Hoshino and M. William Rochlin

Taste Cell Innervation in Neurotrophin Double Knockout Mice

Akira Ito, Irina Nosrat, Michelle Sims, Jong Kim, Arun Bajpai and Christopher Nosrat

Characterization of Brain-Derived Neurotrophic Factor in Human Saliva

Abigail L. Mandel and Virginia Utermohlen

BDNF and NT4 Both are Essential for the Survival of Developing Gustatory Neurons but Differentially Regulate the Development of Taste Buds in the Tongue Vs the Soft Palate

Ami V. Patel, Tao Huang and Robin F. Krimm

Plasticity of Genuiculate Ganglion Cell Innervation of Taste Buds

Faisal Zaidi, Nicholas Warner and Mark C. Whitehead

Cell Differentiation of the Taste Buds on the Soft Palate and Fungiform Papillae Reconnected to Different Gustatory Nerves

Shuitsu Harada, Hiroshi Tomonari, Ayumi Nakayama, Yoichiro Shindo, Yuko Kusakabe and Hirohito Miura

Morphological Measures of Injury-Induced Persistent Alterations of Chorda Tympani Nerve Structure and Function in Adult Rats

Rebecca B. Reddaway and David Hill

Changes in Proliferative Activity of Taste Buds after Irradiation

Ha M. Nguyen and Linda A. Barlow

Expression of the Basal Cell Markers of Taste Buds during Mouse Embryonic Development

Hirohito Miura, Ayumi Nakayama, Yoichiro Shindo, Yuko Kusakabe, Hiroshi Tomonari and Shuitsu Harada

Gene Array Analysis to Identify Cell Cycle Target Genes of Shh Signal Disruption in Fungiform Papilla Formation

Charlotte M. Mistretta, Daniel A. Saims, Hong-Xiang Liu and Lily Hu

Genome-Wide Analysis of Gene Expression in Primate Taste Buds

Peter Hevezi, Bryan D. Moyer, Min Lu, Na Gao, Hortensia Soto, Dalia Kalabat, Bianca Laita, Fernando Echeverri and Albert Zlotnik

Immune Cell Populations in Healthy Human Fungiform Papillae

Pu Feng, Karen K. Yee, Nancy E. Rawson, Lauren M. Feldman, Roy S. Feldman and Paul A.S. Breslin

Structure-Function Analysis of a Subclass of Mosquito Odorant Receptors

Patrick L. Jones, Jonathan D. Bohbot, Guirong Wang and Laurence J. Zwiebel

Analysis of Insect Olfactory Receptors Reveals a GPCR-Atypical 7tm Topology

Aidan Kiely, Andrew V. Kralicek, David L. Christie and Richard D. Newcomb

Insect Olfactory Receptors are Heteromeric Ligand-Gated Ion Channels

Koji Sato, Maurizio Pellegrino, Takao Nakagawa, Tatsuro Nakagawa, Leslie B. Vosshall and Kazushige Touhara

Effect of Ligand Conformation on the Activity of the Olfactory Receptor OR-17

Zita Peterlin, Yadi Li, Kevin Ryan and Stuart Firestein

Receptor Ligand Interactions in Olfaction: the OR1D2 Receptor as an Example

Annika Triller, Hanns Hatt, Marc Spehr and Charles S. Sell

Differential Expression of Ret Receptor Isoforms in the Olfactory System

Tala Kaplinovsky and Anne M. Cunningham

Cellular Differentiation in the OE of MASH1 Knockout Mice

Richard C. Krolewski, Adam I. Packard, Hendrik Wildner and James E. Schwob

Expression of *Splash*, a Proneural Gene, in the Olfactory Organ of Adult Spiny Lobsters

Tizeta Tadesse, Hsin Chien, Manfred Schmidt, Walter W. Walthall, Phang C. Tai and Charles D. Derby

Neurod1-Derived Cells in Olfactory Epithelium

Adam I. Packard, Maryann Giel-Moloney, Andrew B. Leiter and James E. Schwob

The Effect of Blocking Retinoic Acid Signaling on the Regeneration of Olfactory Sensory Neurons in the Adult Mouse Olfactory Epithelium

Carolyn E. Peluso and James E. Schwob

Sequential Expression of Pre-Synaptic Molecules During Olfactory Sensory Neurons Maturation

Florencia Marcucci, Dong-Jing Zou and Stuart Firestein

Establishment of Transgenic Rats in which Olfactory Receptor Cells Overexpress BDNF

Rumi Hasegawa, Sawa Horie, Akira Shiota, Mizuki Kozawa and Shigeru Takami

Identification of a Ciliary Enrichment Element Sufficient for Adenylyl Cyclase Compartmentalization in Primary Cilia

Adrian A. Cuenca and Randall R. Reed

Regional Variation in Survival of the Olfactory Sensory Neurons Expressing Mutant CNGA2 in Heterozygous Mice

David A. Dunston, Michael Bekkerman, Christina Briscoe and Weihong Lin

ATP-Induced Proliferation is Mediated Via Neuropeptide Y (NPY) in Adult Mouse Olfactory Epithelium

Cuihong Jia and Colleen C. Hegg

Immunohistochemical Studies on the Olfactory Organ of Lake Sturgeon

Wei-Lan Chang, Yu-Hsuan Chuang, Corina M. Sandulescu and Chunbo Zhang

Development of Crypt Cells in *A. Naccarii* Sturgeon Embryos

Susana Camacho, Maria V. Ostos, Alberto Domezain and Ramón Carmona

An Integrated Immunohistochemical Analysis of Human Whole-Mount and Cryosectioned Olfactory Tissue

Eric H. Holbrook and James E. Schwob

Transsynaptic Viral Tracing from Defined Neuron Populations in the Olfactory System

David H. Kim, Hetal K. Patel, Matthew E. Phillips, Aurelie Pala, Janna C. Nawroth, Andrew Y. Chang, Gordon M. Shepherd and David C. Willhite

Modified Transsynaptic Tracing Viruses Suggest an Extensive Axon Collateral Network in the Rat Olfactory Bulb

Aurelie Pala, Janna C. Nawroth, David H. Kim, Hetal K. Patel, Matthew E. Phillips, Gordon M. Shepherd and David C. Willhite

Visualizing Mitral Cell Axon Projection in Transgenic Zebrafish

Nobuhiko Miyasaka, Kozo Morimoto, Tatsuya Tsubokawa, Shin-ichi Higashijima, Hitoshi Okamoto and Yoshihiro Yoshihara

Differential Projection Patterns of Mitral/Tufted Cells to Olfactory Cortex Versus Tubercle

Shin Nagayama and Chen Wei

Anatomical and Functional Organization of Kenyon Cells in the Mushroom Bodies of Male *Bombyx Mori*

Ryota Fukushima, Takeshi Sakurai, Keiro Uchino, Hideki Sezutsu, Toshiki Tamura and Ryohei Kanzaki

Sparse Odor Representation in the Mushroom Body and Associative Learning

Iori Ito, Rose C. Ong, Baranidharan Raman and Mark Stopfer

A Standard Brain Atlas in the Search for Neural Networks Involved in Chemosensory Coding and Learning in the Moth *Heliothis Virescens*

Bjarte B. Løfaldli, Pål Kvello, Jürgen Rybak, Kari Jørgensen, Marit Stranden, Randolph Menzel and Hanna Mustaparta

Integration of Characterized Olfactory Interneurons into the Standard Brain Atlas of the Moth *Heliothis Virescens*

Marit Stranden, Bjarte Bye Løfaldli, Pål Kvello and Hanna Mustaparta

The Serotonin Immunoreactive Neuron Retrieved in the Antennal Lobe of the Male Oriental Moth *Helicoverpa Assulta*? Physiological and Morphological Characteristics of a Presumed Centrifugal Neuron

Xin-Cheng Zhao and Bente Gunnveig Berg

Effect of Culture and Familiarization on Odor Categorization

Guillaume Blancher, Paul Arents, Christel Adam and Benjamin Mattei

Effects of Grapefruit Scent on Enhancing Cognitive Performance

Justin Schmitt, Kristin Koval, Ramsey Miller and Bryan Raudenbush

Effects of Congruent Vs. Incongruent Scent During a Scent Dependent and Information Dependent Learning Task

Bryan Raudenbush and Justin Schmitt

Effects of Jasmine Scent on Sleep Quality and Cognitive Performance

Ben Wershing, Jude Almeida and Bryan Raudenbush

Chemosensory Stimulation During Sleep

Boris A. Stuck, Kathrin Grupp and Thomas Hummel

Effects of Peppermint Scent on Enhancing Weight Lifting, Strength, and Endurance

Jude Almeida, Ben Wershing, Keith Fleischmann and Bryan Raudenbush

Retronasal and Orthonasal Time-Intensity Patterns in Relation to Judged Pleasantness, Familiarity, and Food-Relatedness

Jennifer Lee and Bruce P. Halpern

Chemosensory Function in Firefighters: A Longitudinal and Cross-Sectional Analysis

Ryan D. McDermott, Tamika L. Wilson and Pamela H. Dalton

Molecular Mechanisms for Enhancement of Umami Taste Receptor by IMP

Xiaodong Li, Feng Zhang and Haitian Liu

Effect of Chorda Tympani Nerve Transection on IMP-Enhanced Preference to MPG and Arginine in Mice

Takenori Miyamoto, Haruka Akutsu, Kyoko Yoshimoto, Mei Tokumi, Hiroko Eda-Fujiwara and Ryohei Satoh

Recovery of Umami Taste Responses After Crush of the Mouse Chorda Tympani Nerve

Keiko Yasumatsu, Yoko Kusahara and Yuzo Ninomiya

Effect of Inosine Monophosphate (IMP) on Behavioral Response to Lysine and Arginine in Mice

Yuko Murata, Alexander A. Bachmanov and Gary K. Beauchamp

Suppression of Obesity by Spontaneous Drinking of Monosodium L-glutamate (MSG) Solution in Rats

Takashi Kondoh and Kunio Torii

New Assessment of Gustatory Disorders Using Umami Taste Sensation

Shizuko Satoh-Kuriwada, Noriaki Shoji, Takashi Sasano, Misako Kawai, Yuki Hayakawa and Hisayuki Uneyama

Has Norwich's Entropy Theory of Perception Derived Stevens' Law for Taste?

Iftikhar R. Nizami

The Influence of Color and Label Information on Perceptions of Chocolate

Maya U. Shankar, Carmel A. Levitan, John Prescott and Charles J. Spence

Labeled Hedonic Scale for Assessing Liking/Disliking of Oral Sensation

Juyun Lim, Alison Wood and Barry Green

Impact of Sweeteners on Ortho- and Retronasal Aroma Perception

Benno Schuster, Jana Fleischmann and Thomas Hummel

Effects of Context on Perceived Intensity of Flavor Mixtures near Threshold

Lawrence E. Marks, Timothy G. Shepard, Kelly Burger and Miao-Fen Wang

Selective Adaptation Exposes Component Odors and Tastes in Mixtures

Thomas P. Hettinger, Holly F. Goyert and Marion E. Frank

Perception of an Odor from Common Taste Mixtures

Barry Green, Juyun Lim and Floor Oosterhoff

Differential Effects of Body Mass Index and Eating Style on Neural Response to Milkshake

Jennifer A. Felsted, Elissa Epel, David Kessler, Ivan de Araujo and Dana M. Small

Investigating the Existence of Differences for Innovative Expectations and Olfactive Preferences Across Age: The Case of Mature People

Christel Adam, Florence Beurier and Jean-Marc Sieffermann

The Mouth Feel, Taste, and Biophysical Properties of Feeds Given to Patients with Dysphagia

Kathleen M. Wright, Rebecca L. Stephens, Terry D. Blumenthal, Wayne L. Silver and Bruce K. Rubin

Smell and Taste Function in Children with Chronic Renal Failure

Jessica E. Armstrong, David G. Laing, Gad Kainer and Fiona J. Wilkes

Oral Phantasies: the Perceptual World of Thermal Tasters

Martha R. Bajec and Gary J. Pickering

Modeling of Nasal Airflow and Odorant Transport in Patients with Chronic Rhinosinusitis

Kai Zhao, Jianbo Jiang, Yuehao Luo, Beverly Cowart, Edward Pribitkin, Nancy Rawson, David Rosen, Peter Scherer, Christopher Klock, Aldona Vainius and Pamela Dalton

Spatial and Temporal Odorant Transport Patterns in Rat Nose: A Computational Study

Kai Zhao and Jianbo Jiang

Identification of a Lysyl Residue Defining the Binding Specificity of a Human Odorant-Binding Protein

Loïc Briand, Lionel Tcatchoff, Claude Nespoulous and Jean-Claude Pernellet

Xenopus laevis* and *Xenopus tropicalis* have Different Number of OBP Genes: *Xlaebp* and *Xtroobp

Julie. Millery, Claire. Fenech, Nicolas. Pollet, Jean-Claude. Pernellet and Jean. Gascuel

Associations of SNPs in Odorant Binding Protein Genes with Olfactory Behavior in *Drosophila melanogaster*

Ping Wang, Gunjan Arya, Akihiko Yamamoto, Richard F. Lyman, Trudy F. C. Mackay and Robert R. H. Anholt

Xenobiotic Metabolizing Enzyme and Pheromonal Perception in *Drosophila melanogaster*

Arièle Legendre, Stéphane Fraichard, Jean-François Ferveur, Yves Artur and Jean-Marie Heydel

Combinatorial Co-Expression of Major Urinary Protein (MUP) Genes During Ontogenesis is Essential for Olfactory Coding and Social Recognition in Mice

Sergey N. Novikov, Irina I. Ermakova and Elena M. Fedorova

Functional Imaging after Occlusion of the Vomeronasal Organ

Johannes Frasnelli, Johan N. Lundstrom, Julie A. Boyle, Athanasios Katsarkas and Marilyn Jones-Gotman

An Intact Whole-Organ Preparation of the Mouse Vomeronasal Organ: Confocal Life-Cell Imaging in the Microvillous Layer of the Sensory Epithelium

Daniela Fluegge, Corinna H. Engelhardt, Silke Hagendorf and Marc Spehr

Male-Specific Exocrine Peptide ESP1 Activates a Selective Neural Pathway Via V2Rp5 Receptor in the Mouse Vomeronasal System

Sachiko Haga, Yoshihiro Yoshihara and Kazushige Touhara

Immunocytochemical Evidence for Steroid Metabolism and Modification in the Primary Vomeronasal System in Rodents

Shigeru Takami, Rumi Hasegawa and Sawa Horie

Mechanism of Pheromone Adaptation in Vomeronasal Neurons: Calmodulin Feedback Regulates Diacylglycerol-Operated TRP Channels

Jennifer Spehr, Silke Hagendorf, Marc Spehr, Trese Leinders-Zufall and Frank Zufall

The Involvement of Calcium Activated Chloride Channels in Urine Responses of Mouse Vomeronasal Sensory Neurons

Chun Yang and Rona J. Delay

The Canonical Transient Receptor Potential Channel 2 (TRPC2) Forms Protein-Protein Interactions with Homer and RTP in the Rat Vomeronasal Organ

Thomas G Mast, Jessica H Brann and Debra A Fadool

A Conserved Vomeronasal Signaling Pathway in a Non-Mammalian Vertebrate

Karen M. Kiemnec, Celeste R. Wirsig-Wiechmann, Sarah K. Woodley and Lynne D. Houck

Intrinsic Plasticity in the Mouse Vomeronasal Organ: The Role of the Ether-à-Gogo Related Gene Ion Channel

Silke Hagendorf, Corinna H. Engelhardt, Daniela Fluegge and Marc Spehr

Hyperpolarization Activated Cyclic Nucleotide Gated Channels in Mouse Vomeronasal Sensory Neurons

Michele Dibattista, Andrea Mazzatenta, Francesca Grassi, Roberto Tirindelli and Anna Menini

A Putative Endoplasmic Reticulum Chaperone, Calreticulin 4, is Expressed in Mouse Vomeronasal Organ

Sandeepa Dey, Hiroaki Matsunami

A Novel Role for JNK Signaling in Olfactory Sensory Neuronal Death

Nidhi Gangadhar, Brent Stockwell and Stuart Firestein

Degenerative Changes in Olfactory Sensory Neurons Deprived of Neuronal Targets

Kathleen Guthrie, Krista Sultan, Rafael Toledo and Charles Ribak

Loss of *Notch2* in Sustentacular Cells of the Main Olfactory Epithelium Leads to Neurodegeneration

Steven Rodriguez and David M. Lin

Pacap Reduces Cytokine-Induced Apoptosis in Olfactory Neuronal Cells Via Both AC and PIC Transduction Pathways

Mary T. Lucero and Shami Kanekar

Pacap is Required for Maintenance of Olfactory Epithelial Integrity in Adult Mice but not in Neonates

Michelle L. Stamm, James A. Waschek and Mary T. Lucero

Expression of Survivin in Rat Olfactory Epithelium during Postnatal Development

Elke Weiler, Denis Sokolski and Ulf Eysel

Triton X-100 Treatment in Zebrafish Alters Olfactory Epithelium Morphology

Tania R. Iqbal and Christine A. Byrd-Jacobs

Effect of Ginkgo Biloba and Dexamethasone in the Treatment of 3-Methylindole- Induced Anosmia Mouse Model

Jeong-Whun Kim, Ji-Hun Mo and Chun Hee Lee

Probing Olfactory Coding Directly at the Human Cortical Surface

Anat Arzi, Aharon weissbord, Mony Benifla, Alon Friedman and Noam Sobel

Cerebral Responses after Olfactory Stimulation with Phenyl Ethyl Alcohol – How much Stimulation is Necessary? - A Functional MRI Study on Olfaction

Thomas Bitter, Manuel Josiger, Christian Labadie, Hans-Joachim Mentzel, Orlando Guntinas-Lichius and Hilmar Gudziol

Olfactory Perceptual Decision-Making in the Human Olfactory Brain

Nicholas E. Bowman, James D. Howard, Konrad Kording and Jay A. Gottfried

What's on your Mind when you Smell the Roses?

Jelena Djordjevic and Johan N. Lundstrom

Odor Deprivation in the Human Brain

Keng Nei Wu, Nathan Sandalow, James Howard, Nicholas Bowman, David B. Conley, Jr. and Jay A. Gottfried

The Localization of Human Olfactory Cortex: An Ale Meta-Analysis of Functional Neuroimaging Studies

Johan N. Lundstrom and Jelena Djordjevic

The Privileged Status of First Olfactory Associations: An FMRI Study

Yaara Yeshurun, Yadin Dudai and Noam Sobel

The Role of the Amygdala in Perception of Graded Pleasantness

Julie A. Boyle, Jelena Djordjevic and Marilyn Jones-Gotman

Preferential Response to Food Compared to Nonfood Odors in the Insula and Operculum

Genevieve Bender, Simona Negoias, Thomas Hummel, Johannes C. Gerber, Katja Aschenbrenner, Darren R. Gitelman and Dana M. Small

Investigation of Mental Representation of VOC-Exposure Risks in Asthmatics

Laurence Jacquot and Pamela Dalton

Inter-Individual Variability in Olfactory Event-Related Potentials is Related to Reaction Time

Akiko Ishii, Corinne Eloit and Didier Trotier

Olfactory Nerve Scintigram with Nasal Administration of Thallium-201 *in vivo*

Hideaki Shiga, Kohshin Washiyama, Kyoko Hirota, Kazuma Ogawa, Hiroshi Yamaguchi, Yasuhiro Magata, Ryohei Amano, Takaki Miwa and Mitsuru Furukawa

Poster Session III: Thurs. July 24

Enkephalinergic Signaling in Limbic Forebrain Circuits Mediates Palatable Food Intake

Sharif A. Taha and Howard L. Fields

Convergent, not Serial, Striatal and Pallidal Circuits Regulate Opioid-Induced Palatable Food Intake

Sharif A. Taha and Howard L. Fields

Role of Central Opioids in Benzodiazepine Modulation of Gustatory Behavior

Alice Tran, David Pittman and John-Paul Baird

MU Opiates Infused into the NST Alter Fluid-Induced Licking and Gaping

Nicole R. Kinzeler and Susan P. Travers

The Stimulation of μ -Opioid Receptors in the Ventral Pallidum Attenuates Learned Taste Aversion in Rats

Tadashi Inui, Tsuyoshi Shimura and Takashi Yamamoto

Taste is Modulated by Exogenous Opiates in Opiate Dependent Patients

Amy Green and Jacinta O'Shea

Intracellular Signaling Mechanisms of Activation of Postsynaptic δ_1 -Opioid Receptors that Mediate Opioid-Induced Reduction of Solitary Tract-Evoked Epscs of the Parabrachial Nuclei Projection Rostral NST Cells

Mingyan Zhu and Cheng-Shu Li

Greater Connectivity between Anteroventral Insula and Hypothalamus during Sensation of Nutritive vs. Harmful Oral Stimuli

Kristin J. Rudenga, Barry G. Green, Danielle J. Nachtigal and Dana M. Small

Behavioral Evidence of Benzodiazepine-Induced Alterations of the Gustatory Evaluation of Accepted and Aversive Taste Stimuli

David W. Pittman, Ivy E. Farr, Hannah L. Dinnen and John-Paul Baird

Hindbrain Protein Synthesis Blockade Disrupts Long-Term but not Short-Term Conditioned Taste Aversion Processing

Tomas Kiselak, Suma Chandra, Janine Beck, Jasmine Loveland and John-Paul Baird

Gustatory Cortical Activity During a Taste Discrimination Task in Rats

Takashi Yoshida and Donald B. Katz

Dynamic and Multimodal Responses of Amygdalar Neurons in Awake Rats

Donald B. Katz, Stephen E. Grossman and Alfredo Fontanini

The Effects of Dietary Manipulation on Taste and Preference in C57BL.6J Mice

A. Rebecca Glatt, Jennifer M. Saputra and John D. Boughter, Jr.

Role of Dietary Zinc Signal in Food Intake Regulation of the Rats

Michio Komai, Masami Takemoto, Kousaku Ohinata, Makoto Kawanago, Akihiro Asakawa, Tomoko Goto and Hitoshi Shirakawa

Functional Characterization of Molecular and Cellular Mechanisms Underlying Trigeminal Perception of Creamy Tastants

Nicole Schöbel, Jennifer Spehr, Thomas F. Hofmann and Hanns Hatt

Psychophysical Effects to Pulses of Orally Presented Zingerone and Piperine: Analysis with a Dynamic Model

Mark A. Affeltranger, Tyler L. Kowcheck, Brendan A. Cypher, Mary L. Adams and Jack W. Wheeler

Adult Male Rats Avoid Nicotine in a Two-Bottle Free-Access Paradigm

Karen L. Zanotto, Mirela Iodi Carstens and E. Carstens

Effects of Trigeminal Stimulation on Appetite

Per Møller and Hans H. Reisfelt

Putative Chemosensory Cells at Strategic Positions in the GI-Tract

Karin Schwarzenbacher, Nicole Hass and Heinz Breer

Sensory Studies on Olive Oil and Ibuprofen's Pharyngeal Pungency

Catherine Peyrot des Gachons, Bruce Bryant, Gary K. Beauchamp and Paul A. Breslin

Taste-Guided Isolation of a Trp Active Compound From the Korean Food Plant Kaennip (*Perilla Frutescens*)

Gigliola Borgonovo, Angela Bassoli, Sara Caimi, Luciano De Petrocellis, Vincenzo Di Marzo, Gabriella Morini and Leonardo Scaglioni

An Exquisitely Sensitive PH Biosensor in a Marine Catfish

John Caprio, Takayuki Marui, Sadao Kiyohara, Jun Kohbara, Shuitsu Harada, Mika Ozaki, Kentarou Enoki and Mami Shimohara

The Role of Solitary Chemosensory Cells in Irritant-Evoked Inflammation of the Nasal Respiratory Epithelium

Nicole Shultz, Marco Tizzano and Thomas E. Finger

The Respiratory Response of TRPV1 Knockout Mice to Trigeminal Irritants

C.J. Saunders and Wayne L. Silver

TRPM5-Expressing Solitary Chemosensory Cells in Mouse Vomeronasal Organ

Tatsuya Ogura, Mikhael Bekkerman and Weihong Lin

Hydroxy- α -Sanshool Activation of Lumbar Spinal Wide-Dynamic Range Neurons

Carolyn M. Sawyer, Mirela I. Carstens, Christopher T. Simons, Jay P. Slack, T. Scott McCluskey, Stefan M. Furrer and Earl E. Carstens

Spatiotemporal Dynamics of Odor Representation in the Trigeminal Ganglion *in vivo* Visualized by Voltage Sensitive Dye Imaging

Markus Rothermel, Benedict Ng, Dirk Jancke and Hanns Hatt

Molecular Signature of and Trigeminal Neural Pathway from Solitary Chemoreceptor Cells

Makoto Ohmoto, Ichiro Matsumoto, Yoshihiro Yoshihara and Keiko Abe

Quantifying Mechanical Stimuli in Rat and Human Nose Models During Breathing

Jianbo Jiang and Kai Zhao

Odor Thresholds and Respiratory Effects of Sulphur Dioxide

Stefan Kleinbeck, Schaeper Michael, Blaszkewicz Meinolf and van Thriel Christoph

Genomic, Expression, and Functional Analyses of Olfactory Receptors in the Silkworm *Bombyx Mori*

Kana Tanaka, Yukiteru Ono, Tatsuro Nakagawa, Makiko Suwa and Kazushige Touhara

Deconstructing Insect Odorant Receptors

Maurizio Pellegrino, Jeff Liesch, Pearl Rivkin and Leslie Vosshall

A *Drosophila* Odorant Receptor Distinguishes Ligand Enantiomers with High Selectivity

Andrew S. Nichols and Charles W. Luetje

Hidden Markov Models and Sequence-Structure Correlates to Identify Active Sites in Olfactory Receptors

Chiquito J. Crasto

Relationship Between Receptor Code and Odor Quality in Twelve Odorants

Yuichi Furudono, Kayori Takizawa, Yukio Sone, Junzo Hirono and Takaaki Sato

A Human Olfactory Receptor for Waxy, Fatty and Rose Odors

Guenhaël Sanz, Thierry Thomas-Danguin, El Hassan Hamdani, Claire Le Poupon, Loïc Briand, Jean-Claude Pernollet, Elisabeth Guichard and Anne Tromelin

The Cellular Basis of Odor Mixture Representation in a Mammalian System: Peripheral Interactions

Ginny E. Cruz and Graeme Lowe

Development of Card Type Olfactory Identification Test

Tatsu Kobayakawa, Hideki Toda and Naomi Gotow

Clinical Usefulness of the Card Type Olfactory Identification Test for Japanese Patients With Olfactory Disturbance

Takaki Miwa, Hideaki Shiga, Shinji Tatsutomi, Kyoko Hirota, Asuka Tsuchiya and Mitsuru Furukawa

A Short Olfactory Test Based on the Identification of Three Odors

Mandy Scheibe, Ute Pfetzing, Jörn Lötsch and Thomas Hummel

Repeatability of the San Diego Odor Identification Test (SDOIT) and Comparison With the Brief Smell Identification Test (B-SIT)

Elizabeth M. Krantz, Carla R. Schubert, Dayna S. Dalton, Wenjun Zhong, Charles W. Acher, Clinton T. Baldwin, Guan-Hua Huang, Barbara E.K. Klein, Ronald Klein, Michael B. Miller, F. Javier Nieto, James S. Pankow, Ted S. Tweed and Karen J. Cruickshanks

Methodological Factors in Odor Detection by Humans

Paul M. Wise, Toshio Miyazawa and Michelle Gallagher

A Novel Psychophysical Method for Estimating Olfactory Rapid Adaptation in Humans

David W. Smith, Katherine R. Gamble and Thomas A. Heil

The Multiple Intensity Odor Identification Test (MIOID)

Jason M. Bailie, Lloyd Hastings, Katheryn G. Pointer, Brittany Carlisle, Kathleen M. VanDeGrift, Konstantin A. Rybalsky and Robert A. Frank

Test-Retest Reliability of the Olfactory Detection Threshold Test of the Sniffin' Sticks

Andrea Anzinger, Jessica Albrecht, Rainer Kopietz, Veronika Schöpf, Anna Maria Kleemann, Katrin Haegler, Olga Pollatos and Martin Wiesmann

Testing Persons' Sensitivity for Odor and Sensory Irritation Detection and Recognition

Birgitta Berglund and Li Zheng

The Role of the Insula in Taste and Orthonasal Olfaction of Food Odors

Maria G. Veldhuizen and Dana M. Small

Response-Time Measures of Gustatory-Olfactory Flavor Integration

Timothy G. Shepard, Maria G. Veldhuizen, Miao-Fen Wang and Lawrence E. Marks

The Relationship Between Bold Response to a Taste/Olfactory Mixture and Actual Eating Behavior Differs for Young and Older Adults

Erin R. Green, Aaron Jacobson, Lori Haase, Sharilyn Baker, Barbara Cerf-Ducastel and Claire Murphy

Labels about Health Benefits Modulate Insular Responses to Flavors

Danielle J. Nachtigal, Ivan De Araujo and Dana M. Small

Expectation, Experience and Expertise - How to Cope with Incidental Findings in Neuroimaging Studies in Taste and Olfaction

Johannes C. Gerber, Rüdiger von Kummer and Thomas Hummel

Individual Differences in the Acquisition of Odor Preferences: Behavioral and Electrophysiological Correlates

Johan Poncelet, David Probst, Samuel Garcia, Marc Thevenet, Catherine Rouby and Moustafa Bensafi

An fMRI Validation Study Using Independent Component Analysis (ICA)

Veronika Schoepf, Rainer Kopietz, Jessica Albrecht, Anna Maria Kleemann, Hartmut Brückmann and Martin Wiesmann

Functional Characterization of Human Bitter Taste Receptors

Hong Xu, Lan Zhang, Huixian Tang, Alexey Pronin, Cherry Li and Xiaodong Li

Regulation of Bitter-Evoked Calcium Release Signals in Mouse Taste Cells

Michelle Rebello and Kathryn Medler

Nicotinic Acetylcholine Receptors (NACHRS): Novel Bitter Taste Receptors for Nicotine

Albino J. Oliveira-Maia, Tam-Hao T. Phan, Pamela D. Melone, Shobha Mummalaneni, Miguel A.L. Nicolelis, Sidney A. Simon, John A. DeSimone and Vijay Lyall

Identification of Compounds that Selectively Block Bitter Taste Mediated by Human T2R8

Alexey Pronin, Hong Xu, Lan Zhang, Thomas Brady, Paul Brust, Guy Servant, Nicole Gonsalves, Tanya Ditschun and Xiaodong Li

Responses to Quinine-HCl and CaCl₂ in Morphologically Identified Frog Taste Cells

Hideyuki Fukami, Kazuhisa Okuda-Akabane and Yasuyuki Kitada

T1R3 is a Receptor for the Taste of Calcium and Magnesium

Michael G. Tordoff, Hongguang Shao, Laura K. Alarcon, Robert F. Margolskee, Bedrich Mosinger, Alexander A. Bachmanov, Danielle R. Reed and Stuart McCaughey

A Taste for Calcium

Ana M. San Gabriel, Eiji Nakamura, Ken Iwatsuki, Hisayuki Uneyama and Kunio Torii

Glossopharyngeal Nerve Transection does not Impair Unconditioned Avoidance of all Bitters Equally

Laura C. Geran and Susan P. Travers

Taste Nerve Responses to Amino Acids and Bitter Compounds in Zebrafish and Medaka Fish

Akira Furuyama, Kenji Ohsuga, Yoshiei Munakata and Takayuki Marui

A Rapid and Reliable Method for Measuring Chorda Tympani Nerve Responses in Mice

Rachel Felber, Botir Sagdullaev and John I. Glendinning

T2R Gene Family Expression in the Human Tongue: A Comparison Between Normal Healthy Subjects and Patients with Taste Disorders

Minoru Ikeda, Keiko Onoda, Kyoichi Takao, Ryoji Hirai and Shinichiro Kokubun

Trigeminal sensitivity and Olfactory Function in Patients Before and After Septoplasty

Stefanie Schulze, Benno Schuster, Christian A. Mueller and Thomas Hummel

Sensory Perception of Cooling Ingredients by Different Ethnic Groups

Yvonne Koelliker, Beverly J. Tepper and Carter Green

Perceived Air Quality and Symptoms from Exposure to Volatile Organic Compounds Emitted from Microorganisms and Damp Building Materials

Anna-Sara Claesson, Steven Nordin and Anna-Lena Sunesson

Expecting Negative Effects of Odor Exposure Influences Various Stages of Olfactory Information Processing: An Unpleasant Odor Associated with Sensory Irritation (Part I)

Patricia J. Bulsing, Monique, A.M. Smeets, Marcel, A. Van den Hout and Thomas Hummel

Expecting Negative Effects of Odor Exposure Influences Various Stages of Olfactory Information Processing: A Pleasant Odor Associated With Sensory Irritation (Part II)

Monique A. Smeets, Patricia J. Bulsing, Marcel A. van den Hout and Thomas Hummel

Odor and Irritation from Complex Mixtures of Aromatic Hydrocarbons and their Main Constituents

Roland Schmidt, Arlean M. Rohde, W.C. Daughtrey and William S. Cain

Human Performance to Detect and Lateralize Olfactory, Olfactory-Trigeminal, and Trigeminal Substances

Anna Maria Kleemann, Jessica Albrecht, Veronika Schöpf, Rainer Kopietz, Katrin Haegler, John-Martin Hempel, Olga Pollatos, Jennifer Linn, Fesl Gunther, Hartmut Brückmann and Martin Wiesmann

Brain Substrates of Congruent Integration Between Good Odors and Pungent Trigeminal Stimuli

Moustafa Bensafi, Emilia Iannilli, Johan Poncelet, Seo Han-Seok, Johannes Gerber, Catherine Rouby and Thomas Hummel

Mechanisms of Chloride Uptake in Frog Olfactory Receptor Neurons

Cristina Jaen, Hakan Ozdener and Johannes Reisert

Developmental Expression of the Hyperpolarization-Activated Cyclic Nucleotide-Gated Channel in Olfactory Sensory Neurons

Alexandra M. Miller, Arie S. Mobley and Charles A. Greer

ATP-Induced ATP Release Via Purinergic Receptor Stimulation in Mouse Olfactory Epithelium

Sebastien Hayoz and Colleen C. Hegg

Biophysical Properties, Morphology and Gap Junction Coupling of Olfactory Ensheathing Cells

Lorena Rela, Angeliqve Bordey and Charles A. Greer

Cellular Basis for the Mammalian Olfactory Response to Nicotine

Jiang Xu, Bruce P. Bryant, Fritz Lischka, Valery Audige and Nancy E. Rawson

Muscarinic Acetylcholine Receptors in Rat Olfactory Receptor Neurons and Other Nasal Epithelial Cells

Bruce P. Bryant, Jiang Xu, Valery Audige and Nancy E. Rawson

A Role for Retinitis Pigmentosa GTPase Regulator (RPGR) in Olfactory Sensory Neurons

Dyke P. McEwen, Hemant Khanna, Anand Swaroop and Jeffrey R. Martens

Is the Rat Olfactory System Sensitive to the Metabolic Status?

Christine Baly, Karine Badonnel, Marie-Christine Lacroix, Didier Durieux, Roland Salesse and Monique Caillol

Two Anorectic Peptides, Insulin and Leptin, Alter Spontaneous and Odor-Evoked Activity of Rat Olfactory Sensory Neurons

Agnes Savigner, Xavier Grosmaître, Patricia Duchamp-Viret, Michel A. Chaput, Samuel Garcia, Minghong Ma and Brigitte Palouzier-Paulignan

The FXG: A Novel FMRP-Containing Granule Expressed in Olfactory Nerve Terminals

Michael R. Akins, Hanna E. Berk-Rauch, Sean B. Christie, James E. Schwob and Justin R. Fallon

Differences in Matrix Metalloproteinase-9 Expression in Two Olfactory Injury Models

Steve R. Bakos, James E. Schwob and Richard M. Costanzo

Genetic Ablation of Atruncated TRKB Isoform (TRKB.T1) Increases Adult Olfactory Bulb Neurogenesis

Kevin G. Bath, Laura Carim-Todd, Lino Tessarollo and Francis S. Lee

Successful Olfactory Transplantation in Mice: Comparison of Methods

Sayaka Yagi and Richard M. Costanzo

Expression of IGSF8, A Novel Cell Adhesion Molecule, in the Developing Mouse Olfactory Pathway

Arundhati Ray and Helen Treloar

Requirement of Slits and Robo-2 in the Segregation of Basal Vomeronasal Neuron Axons to the Accessory Olfactory Bulb

Janet E.A. Prince and Jean François Cloutier

Neuroglial and FGFR Interactions in Development of the Glia-Rich Axon Sorting Zone in the Moth Olfactory Pathway

Lynne A. Oland, Nicholas J. Gibson, James T. Pearson and Leslie P. Tolbert

Identification of Mitral/Tufted Cell-Specific Transcriptional Enhancer Upstream of Mouse *Tbx21* Gene

Sachiko Mitsui and Yoshihiro

Role of Trkb in Dendritic Development of Mitral Cells in Mouse Olfactory Bulb

Fumiaki Imamura and Charles A. Greer

Functional Insight into the Role of Phosphoinositide-3-Kinase in Mammalian Olfactory Receptor Neurons

Kirill Y. Ukhanov, Elizabeth A. Corey and Barry W. Ache

Phosphoinositide 3-Kinase Mediated Signaling in Lobster Olfactory Transduction

Elizabeth A. Corey, Adeline Pezier, Yuriy V. Bobkov and Barry W. Ache

Phosphoinositide Metabolism is Essential for Regulating the Output of Lobster Olfactory Receptor Neurons

Barry W. Ache, Yuriy V. Bobkov, Adeline Pézier and Elizabeth A. Corey

The Roles of Phosphodiesterases in Shaping the Odor-Evoked Responses of Olfactory Sensory Neurons

Haiqing Zhao and Katherine D. Cygnar

MYR-RIC8A Enhances $G_{\alpha 15}$ -Mediated Ca^{2+} Response of Vertebrate Olfactory Receptors

Keiichi Yoshikawa and Kazushige Touhara

The Na^+/Ca^{2+} Exchanger Inhibitor, KB-R7943, Potently Blocks a Presumptive TRPC Channel Homolog Implicated in Lobster Olfactory Transduction

Adeline Pezier, Yuriy V. Bobkov and Barry W. Ache

Expression of TRP Channel Genes in the Antenna of the Malaria Mosquito *Anopheles Gambiae*

Tan Lu, Guirong Wang, Pingxi Xu and Laurence J. Zwiebel

Analysis of G Proteins in the CO_2 Response of *Drosophila*

C. Andrea Yao and John R. Carlson

Evidence for the Role of Inspiration in Retronasal Olfactory Responses Measured by the Electroolfactogram

Maggie Phan, Lisa Sherrill and John W. Scott

Odor Concentration-Detection Functions in Humans for Homologous N-Acetates

J. Enrique Cometto-Muniz and Michael H. Abraham

The Effect of Different Odorants on Rapid Olfactory Adaptation in Humans

Katherine R. Gamble, Sokunthirith S. Thach, Swati Pradeep, Caitlin A. Lewis, Ryan R. Keith, Jessica A. Slocumb and David W. Smith

Cross Adaptation of Green Odors with or 1-7 Agonists

Anne J. Kurtz and Terry E. Acree

Undecanal as an Antagonist of Bourgeonal at Isointense Levels

Malin Brodin, Miriam Granat and Mats J. Olsson

Modulation of Olfactory Perception: Antagonists of Butane-2,3-Dione

Nicolas Godinot, Delphine Bertolacci and Jean-Claude Spadone

Self-Rating and Olfactory Function

E. Leslie Cameron

Odor Representation Through the Lens of Odor Identification

William S. Cain and Ann-Sara Claeson

Eye Closure Enhances the Olfactory Discrimination Ability but not the Olfactory Sensitivity of Human Subjects

Jessica Albrecht, Veronika Schöpf, Anna Maria Kleemann, Katrin Haegler, Kerstin Lehmann, Jennifer Linn, Gunther Fesl, Hartmut Brückmann and Martin Wiesmann

Dummies Versus Air Puffs: Most Efficient Stimulus Delivery Depends on Odor Volatility

Andreas S. Brandstaetter, Wolfgang Rössler and Christoph J. Kleineidam

The OLFACT (Olfactory Function Assessment by Computerized Testing) Test Battery

Lloyd Hastings and Blair Knauf

Poster Session IV: Fri. July 25**Immunochemical and Ultrastructural Studies of Purinergic Signaling in Rodent Taste Buds**

Ruibiao Yang, John C. Kinnamon, Alana M. Montoya and Stacey M. Thomas

Knocking Out P2X Receptors Prevents ATP Release from Taste Buds

Stephen D. Roper, Yijun A. Huang, Leslie M. Stone, Elizabeth Pereira, Thomas E. Finger and Sue C. Kinnamon

Firing Rate-Dependent ATP Release from Mouse Fungiform Taste Cells with Action Potentials

Yoshihiro Murata, Ryusuke Yoshida, Toshiaki Yasuo, Yuchio Yanagawa, Kunihiko Obata, Hiroshi Ueno, Robert F. Margolskee and Yuzo Ninomiya

Voltage-Gated Sodium Channels Expressed in Taste Bud Cells

Na Gao, Min Lu, Fernando Echeverri, Bianca Laita, Dalia Kalabat and Bryan D. Moyer

Expression of Adenosine Receptor in Mouse Taste Buds

Shinji Kataoka and Thomas E. Finger

Sour Taste Stimuli Evoke ATP Release from Taste Buds

Leslie M. Stone and Sue C. Kinnamon

Presynaptic (Type III) Cells in Mouse Taste Buds Sense Sour Taste

Robert Stimac, Yijun A. Huang, Yutaka Maruyama and Stephen D. Roper

Taste Function in *pkd113* Knockout Mice

Theodore M. Nelson, Nelson D. LopezJimenez, Lino Tessarollo, Masashi Inoue, Stuart A. McCaughey, Alexander A. Bachmanov and Susan L. Sullivan

The Effect of GABA on Human Taste Sensations and the Influence of Food Components on the Activity of Glutamate Decarboxylase, GABA Synthesizing Enzyme

Kumiko Hisaki, Kazuko Wada, Kanako Shinohara, Yumi Nakamura and Hiroshi Ueno

Mouse Taste Cells Co-Release the Neurotransmitters, Serotonin and Norepinephrine

Yijun A. Huang, Yutaka Maruyama and Stephen D. Roper

Immediate and Ongoing Inhibition of 5-HT Re-Uptake have Contrasting Effects on Human Taste Thresholds

Lucy F. Donaldson, Ellen McRobie and Samantha O'Driscoll

Edible Taste Strips as a Novel Method for Evaluating Disturbances in Human Taste Function

Ray A. Abarintos, Vanaeyah M. Tran, Tuong-Vi Pham and Gregory S. Smutzer

Development of a High Throughput (HT) *in vivo* Operant Taste Discrimination Assay

Francis X. Brennan, Daniel J. Long, Heather R. Devantier, Robert W. Bryant, F. Raymond Salemme and R. Kyle Palmer

Examination of *N*-PROP Recognition Thresholds with Edible Taste Strips

Hetvi Desai and Gregory S. Smutzer

The Use of Edible Taste Strips for Measuring Taste Recognition Thresholds

Gregory S. Smutzer, Tuong-Vi Pham and Si Lam

Experience Induced Increases in Taste Discrimination for Sweeteners and Monosodium Glutamate (MSG)

Kristina M. Gonzalez, Adiba Hassan, Alison N. Le, Virginia Mike, Ben A. Torch, Jessalyn P. Wheaton, Todd P. Livdahl and Linda M. Kennedy

Citric Acid Modulates Discrimination of Sweetness Intensity in Sucrose Solutions

Carmel A. Levitan, Maya U. Shankar, John Prescott and Charles Spence

Prop Taste Insensitivity is Associated with Decreased Ability to Detect Differences in the Fat Contents of Salad Dressings in African-American Men

Johannah D. McLean, Daniel May, Beverly J. Tepper and Kathleen L. Keller

Effects of Taste Solutions on Power Frequency Content of Swallowing Submental Electromyogram (SEMG)

Yutaka Miura, Hideki Koizumi, Yuji Morita, Hiroko Mashima, Masako Shimura and Tomio Shingai

Perceptive, Psychological and Behavioural Factors as Determinants of Obesity

Ella Pagliarini, Davide Gaeta, Monica Laureati, Alberto Battezzati and Simona Bertoli

Effects of Video Game Play on Snacking Behavior and Caloric Burn: Nintendo Wii vs. Microsoft X-Box

Jared Bloom, Ryan Hunker, Kristin McCombs, Tim Wright and Bryan Raudenbush

Decreased Ability to Discriminate Differences in Fat Content of Italian Salad Dressings is Associated with Increased Levels of Obesity in Healthy African-Americans

Cameron L. Breen, Megan C. MacDougall, Beverly J. Tepper, Johannah McLean, Dan May and Kathleen L. Keller

Evolution of *Umami* and *Kokumi* Tastes During the Aging of *Doenjang*, a Traditional Korean Soybean Paste

MeeRa Rhyu, Ah Young Song, Chikara Tokunaga and Noboru Fujii

Predictive Modelling to Design Foods with Reduced Salt, Sugar and Fat Levels

Gert-Jan Van den Oever, Conny Keulemans, Erica Van der Linden, Klaas-Jan Zuidam and Gerrit Smit

Does Our Food Approach the Common Optimum Taste (COT)?

Michael Hermanussen, Ulrike Gonder, Dorle Stegemann and Georg Hoffmann

“Excitatory Actions of Noradrenaline on Granule Cells in the Accessory Olfactory Bulb”

Richard S. Smith and Ricardo C. Araneda

Striatal Neurons are a Potential Relay Between Olfaction and SVZ Neurogenesis

Stephanie Young and Angeliqve Bordey

Noradrenergic Modulation of GABAergic Inhibition of Main Olfactory Bulb Mitral Cells

Qiang Nai, Hongwei Dong, Abdallah Hayar, Christiane Linster and Matthew Ennis

Organization of Neuronal Stem Cell Niches in the Olfactory Midbrain of Adult Spiny Lobsters, *Panulirus Argus*

Manfred Schmidt and Charles D. Derby

Molecular Guidance of Newborn RMS Neurons from the Subventricular Zone to the Olfactory Bulb

Joshua Bagley and Leonardo Belluscio

Noradrenergic Neuromodulation in the Olfactory Bulb Regulates Odor Learning in Adult Mice

Shane T. Peace, Dmitriy Migdalovich, Chin Ho Fung, Arjun C. Gokhale, Delphine Guerin, Anne Didier, Christiane Linster and Thomas A. Cleland

Serotonergic Modulation of Odor Representation at the Earliest Stage of Odor Processing in Mice

Akari Hagiwara, Gabor C. Petzold and Venkatesh N. Murthy

CSPGs in the Developing Mouse Olfactory Bulb

Matthew Rosenberg and Helen B. Treloar

Evidence for Regulation of Olfactory Bulb Dopamine Phenotype by Histone Deacetylases

Yosuke Akiba, John W. Cave, Brett Langley, Rajiv R. Ratan and Harriet Baker

Dopamine D₂ Receptor Modulation of ET Cell Bursting

Shaolin Liu and Michael T. Shipley

Modulation Of D₂, but not D₁ Dopaminergic Receptors in the Olfactory Bulb Affects Odor Discrimination Performance

Olga D. Escanilla, David Marzan, Courtney A. Yuhas, Nathalie Mandairon and Christiane Linster

Cholinergic Modulation of Information Content and Temporal Aspects of Odor Responses in the Olfactory Bulb

Zack Nichols, Dipesh Chaudhury and Christiane Linster

Cholinergic Modulation of Mitral Cell Responses to Odors *in vivo*

Dipesh Chaudhury, Zack Nichols and Christiane Linster

Sensory Input Activates Strong Intraglomerular Gabaergic Inhibition of Mitral Cell Apical Dendrites

Zuoyi Shao and Michael T. Shipley

Cholecystokinin Modulates the Activity of Tufted Cells and Granule Cells in Mouse Olfactory Bulb

Jie Ma and Graeme Lowe

Oxytocin-Induced Synaptic Plasticity in the Accessory Olfactory Bulb

Hideto Kaba, Long-Yun Fang and Rong-Dan Quan

Fetal Ethanol Experience and Olfactory Plasticity: Its Contribution to Adolescent Alcohol Abuse

Steven L. Youngentob, Amber M. Eade, Paul F. Kent and Lisa M. Youngentob

Odors and Disease: Volatile Biomarkers From Human Skin Cancer

George Preti, Michelle Gallagher, Steve S. Fakharzadeh, Charles J. Wysocki, Jae Kwak, Jennifer Marmion, Hakan Ozdener, Christopher J. Miller, Chrysalyn D. Schmults, Andrew I. Spielman, Xuming Sun and Samuel Chachkin

News in Epidemiology of Olfactory Dysfunction

Heike Marschner, Hilmar Gudziol and Orlando Guntinas-Lichius

The Prognosis of Olfactory Dysfunction Depends Upon its Etiology and on Remaining Olfactory Function

Simona Negoias, Volker Gudziol, Mareike Trittin, Thomas Hummel and Jörn Lötsch

Impact of Cigarette Smoke on Olfactory Damage in Patients with Chronic Rhinosinusitis

Karen K. Yee, Edmund A. Pribitkin, Beverly J. Cowart, Aldona A. Vainius, Christopher T. Klock and Nancy E. Rawson

Nasal Lavage Cotinine Level as a Tool for the Assessment of Smoking Status

M. Hakan Ozdener, Karen K. Yee, Beverly J. Cowart, Aldona A. Vainius and Nancy E. Rawson

Factors Associated With Smell Loss in Chronic Rhinosinusitis

Beverly J. Cowart, Karen K. Yee, Aldona A. Vainius, Christopher T. Klock, Edmund A. Pribitkin, David Rosen, Kai Zhao and Nancy E. Rawson

Cell-Autonomous Inflammation in Human Aging - Implications for Olfactory Receptor Impairment

Kelli Lynn Mayo and Andres Kriete

Olfactory Perception in Patients with Binge Eating Disorder - Is it Different from Anorexia and Bulimia?

Norbert Thuerauf, Udo Reulbach, Carolin Betz, Eva Kleehaupt and Katrin Markovic

Effects of Repetitive Stimulation with Pleasant and Unpleasant Odours

Franziska Krone, Anita Chopra, Benno Schuster and Thomas Hummel

Assessing Olfactory Hedonic Estimates: How Complex Does the Study Design Have To Be?

Andrea Gossler, Marion Schultheiss, Peter Martus, Katja Frieler and Norbert Thuerauf

Predicting Odor Pleasantness with an Electronic Nose

Rafi Haddad, David Harel and Noam Sobel

“I Don’t Want To Know About It”. Unpleasantness Prevents Odor Identification

Fanny Rinck, Moustafa Bensafi and Catherine Rouby

Shared Hedonic Responses in Rodents and Humans

Nathalie Mandairon, Moustafa Bensafi, Johan Poncelet and Anne Didier

Building a Better Intensity Scale: Which Labels are Essential?

Derek J. Snyder, Lorenzo A. Puentes, Charles A. Sims and Linda M. Bartoshuk

Olfactory Stimulation in Major Depression: A Robust Technique to Elicit Pleasure?

Marion Schultheiss, Andrea Gossler, Karin Reich and Norbert Thuerauf

Thalamic Role in Olfactory Hedonics

Lee Sela, Yaron Sacher, Corinne Serfaty, Nahum Soroker and Noam Sobel

Effect of Aroma on Empathy

Alan R. Hirsch

The Function of the Gustducin in the Soft Palate Taste Buds Differs from that in the Tongue

Ayumi Nakayama, Hiroshi Tomonari, Hirohito Miura, Yoichiro Shindo, Yuko Kusakabe, Yuzo Ninomiya, Robert F Margolskee and Shuitsu Harada

A Novel Role For G α -Gustducin: Regulating the Responsivity of Taste Cells

Tod R. Clapp, Kristina R. Trubey, Aurelie Vandenbeuch, Robert F. Margolskee, Sue C. Kinnamon and Nirupa Chaudhari

Expression of the G α Q Family in Taste Buds of Posterior Tongue: Possible Role in Detection of Sweet and Umami

Marco Tizzano, Gennady Dvoryanchikov, Jennell K Barrows, Nirupa Chaudhari and Thomas E Finger

Identification of Camp Transduction Pathway in the Sugar Receptor Cell of the Fly: Study by the Patch Clamp Techniques

Hideko Kan, Naoko Kataoka-Shirasugi and Taisaku Amakawa

Camp Triggers Ca²⁺ Influx in Mouse Presynaptic/ Type III Taste Cells

Craig D. Roberts, Gennady Dvoryanchikov, Stephen D. Roper and Nirupa Chaudhari

Taste Profiling Utilizing Multi-Photon Fluorescence Lifetime Imaging (FLIM) in Intact Taste Tissue

John Satumba, Brian Anderson, Sean Smith, Var St Jeor, John McDonald, Brian Guthrie, Allen Muroski, Judith McLean, Nancy Rawson and John Teeter

Identification of Genes that Define Specific Taste Cell Populations

Bryan D. Moyer, Peter Hevezi, Na Gao, Min Lu, Fernando Echeverri, Bianca Laita, Dalia Kalabat, Hortensia Soto and Albert Zlotnik

Barriers in Mouse Taste Buds: Dye Penetration Studies

Elizabeth Pereira, Nirupa Chaudhari and Stephen D. Roper

Characterization of Human Fungiform Taste Bud Cells in Primary Culture

M. Hakan Ozdener, Joseph G. Brand, Andrew Spielman, Bruce Bryant, Fritz W. Lischka, John H. Teeter, Paul Breslin and Nancy E. Rawson

Response Properties of Taste Cells in Intact Fungiform Taste Buds

John Teeter, Judith McLean, Brian Anderson, John Satumba, Sean Smith, Var St. Jeor, John McDonald, Brian Guthrie and Allen Muroski, Nancy Rawson

Transient Receptor Potential Channel M5 and Phospholipase- β 2 CO-Localizing in Zebrafish Taste Receptor Cells

Yuki Yoshida, Kana Saitoh, Yoshiko Aihara, Shinji Okada, Takumi Misaka and Keiko Abe

T1R3 Knockout Mice Prefer Polyucose but not Sucrose Taste

Steven Zukerman, Robert F. Margolskee and Anthony Sclafani

Allelic Variations Upstream of the T1R3 Gene Correlate with Sucrose Sensitivities in Humans

Alexey Fushan, Jay Slack, Chris Simons, Ani Manichaikul and Dennis Drayna

Functional Analysis of Naturally Occurring Human Sweet Receptor Variants

Jay P. Slack, T. Scott McCluskey, Christopher T. Simons, Alex Fushan and Dennis Drayna

Temperature- and G α q-Sensitivity of the Chorda Tympani Nerve Responses to Sweeteners in the Wild-Type, T1R3-, G α q-, TRPM5-KO Mice

Tadahiro Ohkuri, Keiko Yasumatsu, Masafumi Jyotaki, Yoko Kusuhara, Toshiaki Yasuo, Yoshihiro Murata, Robert F Margolskee and Yuzo Ninomiya

The Taste Receptor Gene, TAS1R3, is Involved in Taste Responses to Ethanol in Mice

Alexander A. Bachmanov, Xia Li, Danielle R. Reed, Vladimir O. Murovets, Cailu Lin, Natalia P. Bosak, Robert F. Margolskee, Gary K. Beauchamp, Vasily A. Zolotarev and Michael G. Tordoff

Multiple Chemosensory Modalities of Ethanol in Hamsters

Marion E. Frank, Carla French and Thomas P. Hettinger

Sweetness of Lysozymes in Mammalian Milk

Kenji Maehashi, Mami Matano, Masataka Uchino, Shigezo Udaka and Yasushi Yamamoto

Modulation of Taste Sensitivity By GLP-1 Signaling in Taste Buds

Yu-Kyong Shin, Bronwen Martin, Erin Golden, Cedrick D. Dotson, Stuart Maudsley, Wook Kim, Hyeung-Jin Jang, Mark P. Mattson, Daniel J. Drucker, Josephine M. Egan and Steven D. Munger

The Grueneberg Ganglion – A Chemosensory Organ?

Heinz Breer, Joerg Fleischer, Karin Schwarzenbacher and Katharina Mamasuew

Characterization of Cultured Porcine Olfactory Epithelial Cells

Gouya Ram-Liebig, Vladimir Vukicevic, Andreas Hermann, Monika Ehrhart-Bornstein, Richard Funk and Martin Witt

Immunocytochemical Features of Microvillous Cells in the Olfactory Epithelium of Mice

Anne Hansen, Yoshihiro Wakabayashi and Diego Restrepo

Structural and Ultrastructural Characterization of a Novel Class of Cells Expressing OBP-1F in the Rat Olfactory Epithelium

Karine Badonnel, Christine Longin, Thierry Meylheuc, Didier Durieux, Monique Caillol, Roland Salesse and Christine Baly

“A Novel Olfactory Receptor Gene Family in Teleost Fish: Phylogenomics and Cell Type Expression”

Luis R. Saraiva and Sigrun I. Korsching

Analysis of Putative Olfactory G-Protein Coupled Receptors in *Danio Rerio*

Y.Y. Kwan and S.I. Korsching

Functional Asymmetry in the Olfactory System of a Flatfish (*Solea Senegalensis*)

Zélia Velez, Peter C. Hubbard, Eduardo N. Barata and Adelino V.M. Canário

Changes in Olfactory Sensitivity During The European Eel (*Anguilla Anguilla*) Life Cycle

Mar Huertas, Adelino V.M. Canario and Peter C. Hubbard

Factors Influencing Peripheral Olfactory Responses of Female Round Gobies (*Neogobius Melanostomus*)

Alyson J. Laframboise, Yogesh Karare, Zena Alyashae, Alexander P. Scott, Weiming Li, Virginia M. Carr and Barbara S. Zielinski

The Effects of Androgen on Olfactory Response to Prostaglandins and Olfactory Sensory Neuron Proliferation in Fish

Rachelle M. Belanger and Norm E. Stacey

Is there Functionality to the Spatial Distribution of Olfactory Receptors within Dorsal Zone of Olfactory Epithelium?

Tatjana Abaffy and Richard A. DeFazio

The Septal Organ Expresses Broadly Tuned Olfactory Receptors

Xavier Grosmaître, Stefan Fuss, Peter Mombaerts and Minghong Ma

The Electroolfactogram Correlates With the Effect of Odor on Antidromic Spikes in Olfactory Sensory Neurons

John Scott and Lisa Sherrill

Odorant and Concentration-Specific Electro-Olfactograms Recorded at the Human Olfactory Epithelium

Hadas Lapid, Benno Schuster, Noam Sobel and Thomas Hummel

Coding Intermittency in Odor Signals with Ensembles of Bursting Olfactory Receptor Neurons

Yuriy V. Bobkov, Kirill Y. Ukhanov, Sami H. Jezzini, Matt Reidenbach and Barry W. Ache

Olfactory Coding in *Anopheles Gambiae*

Allison Carey, Guirong Wang, Laurence Zwiebel and John Carlson

Coding of Odor Mixtures in *Drosophila* Olfactory Receptor Neurons

Chih-Ying Su and John Carlson

Receptor Guanylyl Cyclase-Mediated Odor Recognition in the Olfactory Epithelium

Trese Leinders-Zufall, Renee E. Cockerham, Stylianos Michalakis, Martin Biel, David L. Garbers, Randall R. Reed, Frank Zufall and Steven D. Munger

Olfactory Necklace Glomeruli Form a Molecularly and Functionally Unique Domain of the Mouse Olfactory Bulb

Cambrian Y. Liu, David S. Koos and Scott E. Fraser

Molecular Mechanisms Underlying Formation of the Odor Map in the Mouse Brain

Hiroo Takahashi, Seiichi Yoshihara and Akio Tsuboi

BIG-2 Mediates Olfactory Axon Convergence to Target Glomeruli

Yoshihiro Yoshihara and Tomomi Kaneko-Goto

Olfactory Sensory Axons Expressing Different Receptors Converge on Individual Glomeruli in Mice Lacking Olfactory Marker Protein

Dinu F. Albeanu, Edward Soucy and Venkatesh N. Murthy

Functional Imaging of Odor Representations After Methyl Bromide-Induced Lesion and Regeneration of Receptor Neuron Inputs to the Olfactory Bulb

Man C. Cheung, James E. Schwob and Matt Wachowiak

Increased Sniffing is Associated with a Behaviorally Relevant Suppression of Dorsal Glomerular Responses Observed for a Binary Mixture of Unrelated Odorants

Brett A. Johnson, Joan Ong, Donald Frederick, Leslie M. Kay and Michael Leon

The Recovery of the Intrabulbar Map Following Unilateral Naris Closure

Diana M. Cummings and Leonardo Belluscio

Precise Circuitry Links Bilaterally Symmetric Olfactory Maps

Zhiqiang Yan, Jie Tan, Chang Qin, Yao Lu, Cheng Ding and Minmin Luo

Intrinsic Connections of the Anterior Olfactory Nucleus

Rachel B. Kay, Jennifer Eudy, Kurt R. Illig and Peter C. Brunjes

Novel Subdomains within the External Plexiform Layer of the Developing Mouse Olfactory Bulb

Eric O. Williams and David Lin

Glomerular Mapping in the Sea Lamprey - Evidence for Two Spatially Distinct Neural Inputs

Barbara Zielinski, Xiang Ren, Warren Green, Alyson Laframboise and Rejean Dubuc

Neural Pathways and Mechanisms Underlying Olfactory-Locomotor Transformations in Lampreys

Dominique Derjean, Aimen Moussady, Elias Atallah, Melissa St Pierre, Xiang Ren, Steve Chang, François Auclair, Barbara Zielinski and Réjean Dubuc

Context Dependent Olfactory Enhancement of Optomotor Flight Control in *Drosophila*

Dawnis M. Chow

Towards a Mechanistic Understanding of Food Odor Driven Motion Using Zebrafish (*Danio Rerio*)

Keith B. Tierney, Xiang Ren, Zena Alyasha'e and Barbara Zielinski

Floral CO₂ as a Cue in Moth Foraging

Aaron Beyerlein, Pablo G. Guerenstein, Alex Eaton-Mordas, Jordanna D.H. Sprayberry, Vonnie D.C. Shields and John G. Hildebrand

Quantification of Selected Host-Seeking Behavior in Mosquitoes

Emi Maekawa, Shinya Fukumoto, Tatsuo Kakimoto, Fumio Tokunaga and Hirotaka Kanuka

The Molecular and Cellular Basis of Olfactory-Driven Behavior in Larval-Stage Disease Vector Mosquitoes

Yuanfeng Xia, Guirong Wang and Laurence J. Zwiebel

Sniffing Behavior and Odor Representations Measured in the Behaving Mouse

Daniel W. Wesson, Tanya Donahou, Marc Johnson and Matt Wachowiak

Olfactory Information Processing in Behaving Mice

Dima Rinberg and Roman Shusterman

Olfactory Discrimination of Aliphatic Odorants at 1 PPM – Too Easy for Mice to Show Odor Structure-Activity Relationships?

Matthias Laska, sa Rosandher and Sara Hommen

Olfactory Discrimination of “Odorless” Mineral Oils by Behaviorally-Trained Mice

R.R. Keith, K.R. Gamble, A.M. Scarabino, N.R. Delvadia, E.L. Marshall, N.M. Cope, L.A. Young and D.W. Smith

Poster Session V

Woundmonitor: Monitoring Volatiles to Detect Infection

Krishna C. Persaud, Anna Maria Pisanelli and Arthur Bailey

Afferent and Efferent Connections of the Parabrachial Nucleus in the C57BL/6J Mouse

Kenichi Tokita and John D. Boughter

GPR Expression in the Rat Taste Bud Relating to Fatty Acid Sensing

Shigenobu Matsumura, Takafumi Mizushige, Takeshi Yoneda, Ai Eguchi, Yasuko Manabe, Satoshi Tsuzuki, Kazuo Inoue, Toshihiko Iwanaga and Tohru Fushiki

Long-Chain Fatty Acids Induce Intracellular Ca²⁺ Via G-Protein Coupled Receptor 120 (GPR120) and Positive Licking Behavior in Mice

Ai Eguchi, Yasuko Manabe, Takashi Iino, Takeshi Yoneda, Katsuyoshi Saitou, Shigenobu Matsumura and Tohru Fushiki

RNA Interference of GPR120 Inhibits Responses to Fatty Acids in the Enteroendocrine Cell Line, STC-1: Implications for Fatty Acid Transduction

Bhavik P. Shah, Pin Liu, Tian Yu, Dane R. Hansen and Timothy A. Gilbertson

Fatty Acids Elicit Membrane Depolarization and a Rise in Intracellular Calcium in Rodent Taste Cells

Pin Liu, Tian Yu, Bhavik P. Shah, Dane R. Hansen and Timothy A. Gilbertson

Fatty Acid-Induced Changes in Intracellular Calcium in Somatosensory Cells: Mechanisms Underlying the Textural Perception of Fat

Tian Yu, Bhavik P. Shah, Pin Liu, Dane R. Hansen and Timothy A. Gilbertson

Removal of the Submaxillary and Sublingual Salivary Glands Impairs Linoleic Acid Taste Discrimination

Jennifer M. Stratford and Robert J. Contreras

Human Detection of Free Fatty Acids

Richard D. Mattes

Mapping Input from T1R3 Sweet Taste Receptors to Central Gustatory Neurons in Mice

Christian H. Lemon

High Energy High Fat Diet Alters Pontine Taste Coding in Rat

Peter Kovacs and Andras Hajnal

Temporal Coding of Taste in the Parabrachial Nucleus of the Pons in the Rat

Daniel W. Platt, Patricia M. Di Lorenzo and Jonathan D. Victor

Benzodiazepine Modulation of Gustatory Coding in the Parabrachial Nucleus

John-Paul Baird, Yoo Na Chung and Jasmine Loveland

Gustatory-Responsive Neurons in the Parabrachial Nuclei Receive Convergent Afferent Input from the Area Postrema in the Hamster

Cheng-Shu Li and Young K. Cho

The Distribution of Gustatory-Activated FOS Expression in PBN Neurons that Project to the Central Nucleus of the Amygdala

John D. Boughter Jr., Valentina L. Savchenko, Kenichi Tokita, A. Rebecca Glatt, Trupti Bajpai and Robert S. Waters

Retrograde Fluorescent Tracer Injections into Brainstem Gustatory-Responsive Regions Suggest that Descending Forebrain Projections Originate Largely From Separate Neuronal Populations in Rat

Yi Kang and Robert Lundy

Expression of C-FOS in Parabrachial Nucleus Following Bitter Stimulation to Denervated Taste Buds of the Rat

Satoshi Wakisaka, Hiroyuki Okada and Shiho Honma

Sweet Expectations: Greater Response in the Anterior Insula and Midbrain to Unexpected Compared to Expected Sweet Taste

Dana M. Small, Katja Aschenbrenner, Marga Veldhuizen and Jennifer Felsted

Employing DNA-Functionalized Carbon Nanotubes to Detect Biologically-Derived Odorants

A.J. Charlie Johnson, Jr., Sam M Khamis, Alan Gelperin, Jae Kwak and George Preti

Visualization, Manipulation and Recording of Nanotube Olfactory Cilia

Hiroko Takeuchi and Takashi Kurahashi

A Cell-Based High-Throughput Screen for New Insect Repellents

Takao Nakagawa, Pearl Rivkin and Leslie B. Vosshall

On a Chip Demonstration of a Functional Role for Odorant Binding Protein in the Preservation of Olfactory Receptor Activity at High Odorant Concentration

Edith Pajot-Augy, Jasmina Vidic, Jeanne Grosclaude, Régine Monnerie, Marie-Annick Persuy, Karine Badonnel, Christine Baly, Monique Caillol, Loïc Briand and Roland Saesle

Odorant Receptor Signaling in Human Prostate Cancer Cells

Eva M. Neuhaus, Jennifer Spehr, Weiyi Zhang and Hanns Hatt

Identifying the Male Mouse-Derived Pheromone(S) that Mediate Estrous Induction

Kelly A. Flanagan and Lisa Stowers

The Isolation and Characterisation of Candidate Odorant and Pheromone Receptors from the Light Brown Apple Moth, *Epiphyas Postvittana*

Doreen S. Begum, Melissa D. Jordan, Sean D. Marshall, Luke Luo, Bart Janssen, Marcus Davy, David L. Christie, Andrew V. Kralicek and Richard D. Newcomb

Molecular Basis for Pheromone Reception By Antennal Neurons of *Heliothis Virescens*

Juergen Krieger, Ewald Grosse-Wilde, Thomas Gohl and Heinz Breer

Identification of Sex Pheromone Receptors from Four Moth Species

Hidefumi Mitsuno, Takeshi Sakurai, Hideshi Naka, Tetsu Ando, Ryohei Kanzaki and Takaaki Nishioka

Activation of Bombykol Receptor Neurons by Ectopically Expressed Olfactory Receptor Triggers Pheromone Searching Behavior in Male Silkmoths

Takeshi Sakurai, Hidefumi Mitsuno, Keiro Uchino, Hideki Sezutsu, Toshiki Tamura, Fumio Yokohari, Takaaki Nishioka and Ryohei Kanzaki

Sulfated Steroids as Natural Ligands of Mouse Vomeronasal Neurons

Timothy E. Holy, Francesco Nodari, Fong-Fu Hsu, Lung-Fa Kao, Xiaoyan Fu, Terrence F. Holekamp and John Turk

High-Throughput Microarray Detection of Vomeronasal Receptor Gene Expression in Rodents

Xiaohong Zhang and Stuart Firestein

Nitric Oxide in Sensory Neurons of the Murine Olfactory System

Daniela Brunert, Sonnur Isik, Heike Benecke, Günther Gisselmann, Wolfgang Schuhmann, Hanns Hatt and Christian H. Wetzel

The Impact of Pentoxifylline and Theophylline on the Electro-Olfactogram of the Mouse – A Pilot Study

Volker Gudziol, Martin Witt and Thomas Hummel

Correlation Between Human Masking and Odorant Suppression of Cell Responses and of Voltage-Dependent Currents

Kentaro Kumihashi, Hirohiko Ishida, Hanako Oi, Takashi Kurahashi and Atsushi Ohuchi

Mechanism of Olfactory Masking

Takashi Kurahashi, Hiroko Takeuchi, Hirohiko Ishida and Satoshi Hikichi

Role of PACS-1 in the Ciliary Localization of the Olfactory Cyclic Nucleotide-Gated Channel

Paul M. Jenkins and Jeffrey R. Martens

Functional Characterization of the Multiple PDZ Scaffolding Protein MUPP1 in Olfactory Receptor Signal Transduction

Sabrina Baumgart, Ruth Dooley, Hanns Hatt and Eva M. Neuhaus

 β -Arrestin2 Mediated Desensitization of Mammalian Odorant Receptors

Sebastian Rasche, Anastasia Mashukova, Hanns Hatt and Eva M. Neuhaus

Identifying Regions Involved in Substrate Specificity in Olfactory Receptors by Using a Comparative Approach Across *Drosophila* Species

Lap Ming (Andy) Law, David L. Christie, Andrew V. Kralicek and Richard D. Newcomb

Odor-Driven Local Field Potential Oscillations are Temporally Dynamic, Spatially Localized and GABA_A-Dependent in the Antennal Lobe of the Moth *Manduca Sexta*

Oakland Peters and Kevin C. Daly

Postembryonic Development of the Glomerular Map in the Zebrafish

Oliver Braubach, Alan Fine and Roger P. Croll

Genetic Dissection of Zebrafish Olfactory Circuitry Mediating Attractive Response to Amino Acids

Tetsuya Koide, Nobuhiko Miyasaka, Kozo Morimoto, Koichi Kawakami and Yoshihiro Yoshihara

Processing of Bile Salt Odor Information by Single Forebrain Neurons in the Channel Catfish

Shane Rolen and John Caprio

Heterogeneity of the Odor-Evoked Response within a Glomerulus of the Mouse Olfactory Bulb

Ryota Homma, Lawrence B. Cohen, Olga Garaschuk and Arthur Konnerth

Discrimination and Generalization in Natural Floral Blends

Patricia C. Fernandez, Fernando F. Locatelli, Anna Yoshihiro, Rebecca Bramble and Brian H. Smith

C-FOS Analysis Reveals Differences in Glomerular Response Profiles for Three Musk Odorants in the Rat Olfactory Bulb

Swetlana Deutsch, Boris Schilling, Stephan Bieri and Raimund Apfelbach

A General Theory of Olfactory Bulb Odor Representations: Regulated Self-Surround Decorrelation, Spike Synchronization, and Natural Scenes

Thomas A. Cleland

Respiration-Gated Formation of Gamma and Beta Neural Assemblies in the Mammalian Olfactory Bulb

Tristan Cenier, François David, Corine Amat, Philippe Litaudon, Samuel Garcia and Nathalie Buonviso

Correlation Between Olfactory Bulb Volume and Olfactory Function

Dorothee Buschhueter, Martin Smitka, Stefan Puschmann, Johannes Gerber and Thomas Hummel

The Firing Rate of Neurons in Piriform Cortex is Influenced by Association of Odor with Reward and Can be Altered by Learning

Jennifer D. Whitesell, Wilder Doucette and Diego Restrepo

What Do We “See” of Odor Mixtures?

Saho Ayabe-Kanamura, Akiko Oshida and Satoshi Hikichi

Mixture Interactions Among Coffee Aroma Compounds in Detection of PERI-Threshold Odors by Humans

Toshio Miyazawa, Michelle Gallagher, George Preti and Paul M. Wise

Perceptual Interactions in Mixtures of Odorants

Thierry Thomas-Danguin, Noëlle Béno, Akiko Ishii, Elodie Le Berre, Anne Tromelin and Guenhaël Sanz

Antihypertention Effect of Odors on Awake Rats with a Particular Combination of Chemicals

Tomonori Shinkoda, Kanae Senda, Ken Shimono, Hiroaki Oka and Shoji Komai

Perceptual and Semantic Learning Modify the Perception of Odor Blending Mixtures

Elodie Le Berre, Elodie Jarmuzek, Noëlle Béno, Patrick Etiévant, John Prescott and Thierry Thomas-Danguin

Scent Signals of Individual Genetic Identity used in Mate Choice

Jane L. Hurst, Michael D. Thom, Sarah A. Cheetham, Stuart D. Armstrong, Duncan H. Robertson, Amanda J. Davidson, Paula Stockley and Robert J. Beynon

Effects of Androstadienone and Menstrual Cycle Phase on Flirting Behavior in Random Couples

Mats J. Olsson, Johan N. Lundstrom, Francisco Esteves, Patricia Arriaga and Martha K. McClintock

Are there Gender Differences and Genre Dependencies in the Human Axillary Secretions Produced in Response to Visual Stimuli?

Lisa M. Weingates, Andra L. Kowalczyk, Catherine E. Ruggiero and David E. Hornung

Disruption of Olfactory Environment Impacts Close Relationships in Young Women

Robin J. Freyberg and Marie-Paule Bensoussan

Are Tears a Human Chemosignal?

Shani Gelstein, Yaara Yeshurun, Yehuda Roth and Noam Sobel

Eliciting and Blocking Odor-Arousal Associations

Christopher Maute and Pamela Dalton

The Necessity of Olfactory Input for Different Phases of Socially Transmitted Food Preference

Yaihara Fortis-Santiago, Benjamin Rodwin and Donald Katz

Chemosignal of Fear Modulates Fear Recognition in Ambiguous Facial Expressions

Wen Zhou and Denise Chen