
List of Abstracts from the Twenty-sixth Annual Meeting of the Association for Chemoreception Sciences

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A.K. Vinnikova, V. Lyall, G.L. Heck, T.T. Phan and J.A. Desimone

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Proliferation of lingual macrophages after unilateral denervation of fungiform taste buds

L.P. Mccluskey and C.S. Rigsby

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E.R. Liman and D. Liu

Deorphanization and functional snp analysis of TAS2R bitter taste receptors

B. Bernd, K. Christina, M. Winnig, J. Slack, P.A. Breslin, D.R. Reed, C.D. Tharp, U. Kim, D. Drayna and W. Meyerhof

Symposium: Olfaction and Neurodegenerative Disorders**Olfaction and neurodegenerative disorders**

R. Doty

Longitudinal evaluation of olfactory function in Alzheimer's disease

D.P. Devanand and M.H. Tabert

Olfactory system dysfunction in schizophrenia

P.J. Moberg and B.I. Turetsky

Olfactory dysfunction in multiple sclerosis

R.L. Doty

Olfaction in Parkinsonism

C. Hawkes

Posters: Development of the Gustatory System**EGF signaling in patterning fungiform papillae in embryonic rat tongue**

H. Liu and C. Mistretta

Taste bud primordia develop in rodent tongue cultures

E. Walters and J. Mbiene

Identification of developmentally regulated genes expressed in taste buds

K. Iwatsuki, A. Watanabe, H. Aburatani and R. Margolskee

Relationship between expression of postsynaptic density protein 95 and the development of taste buds in the circumvallate papillae of rat compared with G-gustducin and protein gene product 9.5

K. Ueda, A. El Sharaby and S. Wakisaka

Neurotrophic factors regulate the sensitivity of geniculate axons to Sema3a during innervation

J. Saldanha, R. Vilbig and M.W. Rochlin

Differences in trophic factor receptor and Eph expression may contribute to geniculate nerve divergence

A. Spec, M.K. Kashyap, A. Yamout and M.W. Rochlin

Slide: Development of the Gustatory System**Taste placodes are primary targets of early geniculate but not trigeminal peripheral nerve endings in the developing tongue of mouse embryos**

J. Mbiene

Posters: Development of the Gustatory System**Roles for Hedgehog proteins in supporting neuron survival and neurite extension in embryonic geniculate and trigeminal ganglia**

L. Bai and C. Mistretta

Gustatory phenotype in double neurotrophin knockout mice

I. Nosrat, K. Agerman, P. Ernfors and C.A. Nosrat

Neuronal death in the rat geniculate ganglion during development

V.M. Carr, S.I. Sollars and A.I. Farbman

Posters: Bitter Taste**Blocking glutamate receptors in the parabrachial nucleus reduces aversive oromotor responses to quinine in conscious rats**

M.S. King, G.S. Keller and A.B. Uflacker

The time-course and specificity of long-term adaptation to a 'bitter' taste stimulus in mice

J. Glendinning, J. Kong and M. Bomsztyk

Covariation in taste responses to multiple bitter stimuli in rats

S.M. Brassler, C.H. Lemon and D.V. Smith

PLC2 knockout mice display lick avoidance to high concentrations of quinine and denatonium

C.D. Dotson, T.A. Richter, S.D. Roper and A.C. Spector

Functional characterization of human T2R bitter receptors

E. Sainz, J.F. Battey, J.K. Northup and S.L. Sullivan

Slide: Bitter Taste**The evolutionary diversity of bitter taste**

T.P. Hettinger and M.E. Frank

Posters: Bitter Taste**High resolution mapping of the bitter taste sensitivity locus *Qui***

T.M. Nelson, S.D. Munger and J.D. Boughter Jr

Relationship between genotypes of the TAS2R38 gene and bitter perception in

J.A. Mennella, M.Y. Pepino, J.M. Kennedy, K.J. Mascioli and D.R. Reed

Bitter taste markers identify sweet and alcohol hedonics and intake

M.E. Dinehart, L. Bartoshuk, E. Kinsley and V.B. Duffy

Posters: Olfactory Bulb: Coding**Inhibition of adenylyl cyclase in lobster olfactory receptor neurons enhances central responses to odors**

J.F. Aggio, K. Daly and B. Ache

Inter- and intra-species antennal imaginal disc transplants: behavior, sensory and central olfactory neurophysiology

K.N. Hillier, N.J. Vickers and C. Linn

Macroglomeruli in the worker caste of leaf-cutting ants

C.J. Kleineidam, M. Obermayer, W. Halbich and W. Roessler

The effects of stimulus dynamics on olfactory lobe responses in the crayfish, *Procambarus clarkii* using ensemble recording techniques

M. Wolf, K. Daly and P.A. Moore

The effect of stimulus duration on euclidian response distance measures of odor discrimination across antennal lobe populations in *Manduca sexta*

K.C. Daly and B.H. Smith

Characterization of labeled cells in the olfactory bulb of transgenic zebrafish expressing the simian cytomegalovirus promoter

C.L. Fuller, S.T. Suhr, D.J. Goldman and C.A. Byrd

Cadherin and catenin expression in the olfactory nerve

M. Akins and C.A. Greer

Action potential backpropagation and modular processing of vomeronasal receptor input in rat accessory olfactory bulb

J. Ma and G. Lowe

Mitral/tufted and granule cell response specificity in the mouse olfactory bulb

I.G. Davison, E. Shtoyerman and L.C. Katz

Responses of olfactory interneurons in the behaving odor-conditioned mouse

D. Rinberg, M. Fee, F. Ollinger and A. Gelperin

Ontogeny of odor discrimination

M. Fletcher and D. Wilson

Effects of functional group position on glomerular activation patterns evoked by ester and alcohol odorants

B.A. Johnson and M. Leon

Responses to ketones are not organized chemotopically within a ketone-responsive glomerular module

H. Farahbod, B.A. Johnson and M. Leon

Informatics tools for global mapping of odor-induced neural activity in the glomerular layer of the rodent olfactory bulb

N. Liu, F. Xu, G.M. Shepherd and P.L. Miller

Lateral inhibition: it makes scents as a neuronal coding strategy in olfaction

H. Lei, C. Reisenman, T.A. Christensen and J.G. Hildebrand

Configurational and elemental odor mixture perception can arise from local inhibition

T. Cleland and C. Linster

Slide: Olfactory Bulb: Coding**High-dimensional contrast enhancement in odor space**

T.A. Cleland and P. Sethupathy

Poster: Olfactory Bulb: Coding**Glomerular on-off model of olfactory coding**

D. Rinberg, A. Gelperin and A. Koulakov

Posters: Social Odors and Behavior**Understanding chemical communication under lotic and lentic conditions in the laboratory with crayfish**

C. Redman, D.A. Bergman and P.A. Moore

HPLC analysis of the chemical composition of urine in the crayfish, *Orconectes rusticus*

A. Martin, D. Bergman and P.A. Moore

The utilization of the major chelae by male crayfish (*Orconectes rusticus*) for detecting female pheromones

R.M. Belanger and P.A. Moore

Individual recognition in the lobster, *Homarus americanus*: the loser remembers

M.A. Steinbach and J. Atema

Chemical signals and chemosensory pathways involved in spiny lobster sheltering behavior

A.J. Horner, S.P. Nickles and C.D. Derby

In search of sex pheromones in blue crabs

M. Kamio, J. Kubanek and C.D. Derby

Possible involvement of phosphatidylcholines as a signal substance mediating the recognition of school in the catfish, *Plotosus lineatus*

K. Matsumura, S. Matsunaga and N. Fusetani

Preen gland secretions of a scented and unscented seabird

J. Hagelin, L. Rasmussen and J. Reneerkens

New insights on the social structure and odor function of a tangerine-scented seabird

L. Kett, J. Hagelin and L. Rasmussen

Behavioral and physiological responses to a putative alarm odor in European starlings (*Sturnus vulgaris*)

E.C. Leininger, A. Hille and J. Hagelin

The influence of context on female MHC-based mate choice

E.E. Shaw-Taylor and M. McClintock

The scent of friendship: high school students research the mysteries of human odor recognition

S.B. Olsson, J. Barnard and L. Turri

Slides: Olfactory Behavior & Psychophysics**Foraging in a complex chemical landscape: DOM from elevated CO₂ detritus and its impact on crayfish orientation to a food source**

J. Adams and P.A. Moore

Chemically induced antennular grooming in the spiny lobster, *Panulirus argus*, is mediated by non-olfactory sensilla

M. Schmidt and C.D. Derby

Discrimination between enantiomers of carvone and terpinen-4-ol odorants in normal rats and those with lesions of the olfactory bulbs

B. Slotnick and K. McBride

Size and numbers don't matter (that much)—relative size of olfactory brain structures and number of functional olfactory receptor genes are poor predictors of olfactory performance

M. Laska

A psychophysical test of the vibration theory of olfaction

A. Keller and L.B. Vosshall

Functional connectivity of the hippocampus during an olfactory task: differences observed between young and elderly

R. Calhoun-Haney, S. Ferdon, C. Barbara and C. Murphy

Impact of the chemical senses on augmenting memory, attention, reaction time, problem solving, and response variability: the differential role of retronasal versus orthonasal odorant administration

P. Zoladz, B. Raudenbush and S. Lilley

The magic number 3 applies to components identified in complex odor-taste mixtures

D. Laing, K. Marshall, A. Jinks and I. Hutchinson

Symposium: Non-neuronal Cells of the Olfactory System in Development**Sustentacular cells—more active than we ever imagined**

C. Hegg, F. Vogalis and M. Lucero

A glia-axon *pas de deux* underlies olfactory receptor axon sorting

L.A. Oland

Sorting and glial-neuronal interactions in the olfactory nerve layer

H.B. Treloar, M. Akins, C. Iwema, T. Dodds and C.A. Greer

Losing the path; cell migration in a changing forebrain

S. Demarchis, F. Rossi, A. Fasolo and A.C. Puche

Posters: Chemical Ecology**Orientation to temporally and spatially complex odor signals in the crayfish, *Orconectes rusticus***

T.J. Zulantz, E. Quinn, M. Wolf and P.A. Moore

Fluid dynamics and chemical signals in the crayfish walking legs

M. Cook and P.A. Moore

The role that boundary layers around crayfish sensory appendages act as temporal filters for odor plumes

L. Urban and P.A. Moore

Slide: Chemical Ecology

From odor plume to antennule: do crayfish antennules vary with flow habitat as predicted to maximize odor molecule capture?

K.S. Mead

Posters: Chemical Ecology

Do movements of honeybee antennae enhance capture of odorants?

G. Miller, C. Loudon and B.H. Smith

Olfactory-mediated search behaviors of migratory sea lampreys seeking pheromone-laden spawning streams in the Great Lakes

L.A. Vrieze and P.W. Sorensen

Chemical fractionation demonstrates that the sea lamprey migratory pheromone is comprised of several bile acid-like compounds

J.M. Fine and P.W. Sorensen

Slide: Chemical Ecology

Larval reef fish discriminate between reef odors and may use this in recruitment

J. Atema, G. Gerlach and M. Kingsford

Posters: Chemical Ecology

Fruit odor discrimination and host race formation in *Rhagoletis* fruit flies

C. Linn, S. Nojima and W. Roelofs

CO₂ is involved in the oviposition behavior of *Manduca* moths

P.G. Guerenstein, L. Abrell, W.L. Mechaber, G. Stange and J.G. Hildebrand

Developmental expression and tissue distribution of an odorant-binding protein in the male yellow fever mosquito *Aedes aegypti*

J. Bohbot and R. Vogt

Mechanisms of action of defensive secretions of the sea hare *Aplysia californica* against the spiny lobster *Panulirus interruptus*

S. Shabani, C.D. Derby, C. Kicklighter and P. Johnson

Protein-mediated defense in *Aplysia californica* against the predatory anemone *Anthopleura sola*

C. Kicklighter, P. Johnson, H. Yang, P. Tai and C. Derby

Predator odors and reproduction in house mouse under laboratory and semi-natural conditions

V. Voznessenskaya, S. Naidenko, N. Dulchenko and L. Clark

Slide: Chemical Ecology

Manufacture and testing of chemical-signal-enhanced devices for deterring crop-raiding elephants

L.E. Rasmussen, S.W. Riddle and H. Roeder

Posters: Accessory Olfactory System

Modification of odor investigation by female opossums (*Monodelphis domestica*) after accessory olfactory bulb ablation

I. Zuri and M. Halpern

Two populations of granule cells in the accessory olfactory bulb of the opossum, *Monodelphis domestica*

C. Jia and M. Halpern

Vomeronal and olfactory convergence in medial amygdala

G.R. Case and M. Meredith

Categorization of chemosensory input in medial amygdala requires vomeronasal input in both sexually naive and experienced male hamsters

J. Westberry, C.L. Samuelsen and M. Meredith

Cortical response to androstadienone with or without functional occlusion of the vomeronasal duct—a functional magnetic resonance imaging study

J.C. Gerber, J.N. Lundstrom, J. Frasnelli, M. Knecht, M. Olsson and T. Hummel

Characteristics of general and specific chemosensory responses in the snake accessory olfactory bulb

A. Cinelli, C. Li, D. Wang, W. Liu, P. Chen and M. Halpern

Slide: Olfactory Sensory Neuron Physiology

Chloride homeostasis in mouse ORNs

J. Reisert, K. Yau and J. Bradley

Posters: Olfactory Sensory Neuron Physiology

Chloride homeostasis in mouse olfactory neurons

R. Delay, T. Verret and R. Gorman

Expression of Cl⁻ cotransporters in mouse olfactory neurons

A.P. Schannen and R.J. Delay

Pendrin, a chloride transporter, is expressed in olfactory receptor neurons

N.K. Kleene, J. Zhang, S.K. Pixley, M. Soleimani and S.J. Kleene

Plasma membrane calcium pumps in the mouse olfactory and VNO receptor cells

M. Cusick, S. Chandran, J. Van Houten and R. Delay

Olfactory epithelial localization and dendritic morphology of golf negative olfactory sensory neurons projecting to medial olfactory bulb glomeruli in the larval sea lamprey (*Petromyzon marinus* L.)

A.E. Firby, W.J. Arbuckle and B.S. Zielinski

Electrophysiology of sustentacular cells in mouse olfactory epithelium

F. Vogalis, C. Hegg and M. Lucero

Transcripts enriched in sensory neurons and supporting cells of the olfactory epithelium

T. Yu, J.C. McIntyre, S.C. Bose, D. Hardin and T.S. McClintock

Expression profiling of phenotypically identified olfactory sensory neurons

J.C. McIntyre, T. Yu, R.S. Shetty, N. Sammeta, M.A. Smith and T.S. McClintock

How sensitive can a 'broadly tuned' olfactory receptor be?

T. Nickell

Olfactory 'interferometry'—non-contiguous distributions of olfactory receptor neurons expressing one olfactory receptor

J.S. Kauer and J.E. White

Assessing airflow parameters in rat EOGs

J.W. Scott and H.P. Acevedo

Altered olfactory sensory neuron phenotype in mucopolysaccharidoses I and VI

N.E. Rawson, L.M. Wysocki, L. Dankulich, G. Gomez and M. Haskins

Biophysical model of olfactory receptor neuron pairs reveals mechanism for gap junction mediated synchronized firing at threshold odor concentrations

L. Buntinas, C. Zhang and D. Restrepo

Posters: Sweet Taste**Reduction of sweet-suppressing effects of gurmarin by kallikreins increased in the submandibular saliva of rats fed gymnema-containing diet**

A. Yamada, H. Katsukawa, D. Sugita and Y. Ninomiya

Behavioral testing of the interaction of sweet taste and solution temperature in the rat

M. Denbleyker, P.A. Taylor, P. Smith and J.C. Smith

Molecular studies of sweet taste receptor function

P. Jiang, Z. Liu, L. Benard, L. Snyder, R. Margolskee and M. Max

Allelic variation of the TAS1R3 taste receptor gene selectively affects behavioral and neural taste responses to sweeteners in the F2 hybrids between C57BL/6ByJ and 129P3/J mice

M. Inoue, D.R. Reed, X. Li, M.G. Tordoff, A.A. Bachmanov and G.K. Beauchamp

Posters: Taste Psychophysics**Perceptual variance: how discrimination methods become less discriminating**

H. Lee, S. Jeon, K. Kim and M. O'Mahony

Bimodal distribution of sucrose octaacetate bitter taste sensitivity, and heritability of this trait among twins

A.A. Tharp, S.M. Alarcon, C.D. Tharp, D.R. Reed and P.A. Breslin

Gustatory response times to intensity and hedonic judgments

M.G. Veldhuizen and J.H. Kroeze

Thermal taste is associated with generally higher taste responsiveness

B. Green and P. George

Electric stimulation and metallic taste

H.T. Lawless and D.A. Stevens

Sucrose and sodium chloride self-adaptation using 'taste'

A. Ashkenazi, J.F. Gent, L.E. Marks and M.E. Frank

Perceived intensity functions generated under simulated fMRI scanning conditions

L.B. Haase, B. Cerf-Ducastel, C. Mellinger, A. Jacobson and C. Murphy

Supertasting is not explained by the PTC/PROP gene

L.M. Bartoshuk, A. Davidson, J. Kidd, K.K. Kidd, W. Speed, A. Pakstis, D. Reed, D. Snyder and V.B. Duffy

Childhood tobacco exposure increases obesity risk in adult men

D.J. Snyder, S.S. O'Malley, S. Mckee and L.M. Bartoshuk

The influence of head trauma, otitis media, and tonsillectomy on oral sensation, fat acceptance, and body mass index (BMI)

A. Chapo, J. Alex, D. Coelho, V.B. Duffy, D. Snyder and L. Bartoshuk

Slide: Taste Psychophysics**Gustatory responses to unilateral glossopharyngeal nerve damage**

D.Z. Pitovski and M. Goins

Slides: Cortical Signal Processing**Flexibility, not content, of cue representations in ABL depends on input from OFC**

G. Schoenbaum, M.P. Saddoris and M. Gallagher

Brain activation pattern in response to olfactory recognition memory

B. Cerf-Ducastel, M. Chen, E. Abou, L. Haas and C. Murphy

Context dependent activity in primary olfactory cortex of humans

N. Sobel, C. Zelano, J. Mainland, J.A. Porter, B. Johnson, E. Bremner, M. Bensafi and R. Khan

Information coding in the olfactory system

L. Buck and Z. Zou

Symposium: Chemical Communication in Mammals: From Pheromones to Individual Recognition**The mammary pheromone of the rabbit: identity, source, and some functions**

B. Schaal, G. Coureaud, A. Moncomble and D. Langlois

Making 'scents' of ownership

J. Hurst

Why musth (and other) elephants use pheromones

L.E. Rasmussen and D.R. Greenwood

Individual recognition: signals, behavior and neural mechanisms

R.E. Johnston

Posters: Taste: Animal Behavior**Microstructural analysis of licking in the formation and extinction of a conditioned taste aversion**

J.P. Baird, S.J. St. John and E.A. Nguyen

D-Cycloserine potentiates short-delay, but not long-delay, conditioned taste aversion

R.A. Davenport and T.A. Houpt

Differences in gustatory behavior between C57BL/6J and DBA/2J inbred mice

S. Raghov, J.D. Boughter, T.M. Nelson, S.J. St. John and S.D. Munger

Gaping to quinine in glossopharyngeal nerve-transected rats after postsurgical taste aversion conditioning

A. Bayevsky, C.L. Colbert, M. Garcea, A. Newth and A.C. Spector

Taste preference and taste buds maintenance after unilateral lingual denervation in rats

J. Lee, Y. Kim, Y. Moon and J. Jahng

Posters: Taste: Peripheral Connectivity**Ultrastructure of morphologically identified chorda tympani axons in the nucleus of the solitary tract in developmentally sodium-restricted and control rats**

O.L. May, A. Erisir and D.L. Hill

Gustatory nerve terminal fields in rats recovered from early developmental sodium restriction

J.E. Mangold and D.L. Hill

Isoforms of the synaptic vesicle protein SV2 have different locations in the rat circumvallate gustatory tissue

G.M. Nelson

Synaptophysin-like immunoreactivity in circumvallate papillae of the rat and mouse

K.C. Schmidt, R. Yang and J.C. Kinnamon

Immunocytochemical analysis of syntaxin in rat circumvallate taste buds

R. Yang, S. Thomas and J.C. Kinnamon

Taste buds and surrounding fibers are immunoreactive for the ionotropic ATP receptor P2X7

L.M. Stone and S.C. Kinnamon

Recovery of gurmarin-sensitive neural responses and expression of T1R3 and gustducin in fungiform papillae after crush of the mouse chorda tympani

K. Yasumatsu, N. Shigemura, Y. Shigeoka and Y. Ninomiya

The neural isoform of tryptophan hydroxylase is localized to taste bud cells

J. Cao, L. Huang and J. Brand

Taste buds release 5-HT when depolarized

Y.J. Huang, K.S. Lu and S.D. Roper

Analysis of a human fungiform papillae cDNA library and identification of taste-related genes

O. Rossier, J. Cao, T. Huque, A.I. Spielman, R.S. Feldman, J.F. Medrano, J.G. Brand and J. Le Coutre

Poster: Human Olfaction: Pathology**Olfactory functions and volumes of orbitofrontal and limbic regions in schizophrenia**

C.I. Rupp, W.W. Fleischhacker, G. Kemmler, C. Kremser, R.M. Bilder, S. Mechtcheriakov, P.R. Szeszko, T. Walch, A.W. Scholtz, M. Klimbacher, C. Maier, G. Albrecht, T. Lechner, S. Felber and H. Hinterhuber

Slide: Human Olfaction: Pathology**Diminished posterior nasal volumes in male patients with schizophrenia**

D.R. Roalf, B.I. Turetsky, C.C. Balderston, R.E. Gur and P.J. Moberg

Posters: Human Olfaction: Pathology**Olfactory testing differentiates idiopathic Parkinson's disease from essential tremor**

M. Shah, N. Muhammed, L. Findley and C.H. Hawkes

Memory for emotional and neutral odors and amygdala: electrophysiological recordings in patients with epilepsy

J. Hudry, S. Pouliot, J. Gotman and M. Jones-Gotman

Olfactory dysfunction in degenerative ataxias

T. Connelly, J.M. Farmer, D.R. Lynch, I.A. Tourbier and R.L. Doty

Slides: Human Olfaction: Pathology**Diagnostic options and limits in patients with olfactory dysfunction after head injury**

B.R. Haxel, W. Mann and A. Mackay-Sim

Olfactory deficits in sinonasal disease

R.C. Kern, D.B. Conley and A.M. Robinson

Posters: Human Olfaction: Pathology**Chemosensory changes from exposure to formaldehyde in anatomy labs**

P. Dalton, M. Gould and R. Opiekun

Qualitative olfactory dysfunction: frequency and prognostic significance

T. Hummel, H. Maroldt, J. Frasnelli, B.N. Landis, K. Hüttenbrink and S. Heilmann

High incidence of functional anosmia in the general population

B. Landis, C. Konnerth, K. Hüttenbrink and T. Hummel

Estrogen replacement therapy: does it affect smell function in postmenopausal women?

J.K. Neff, C. Knipe and R.L. Doty

Slide: Human Olfaction: Pathology**Modeling of airflow and odorant delivery pattern in a pre- and post-operative nasal cavity: a quantitative evaluation of surgical intervention**

K. Zhao, P.W. Scherer, B.J. Cowart, E.D. Pribitkin, D. Rosen and P. Dalton

Posters: Human Olfaction: Pathology**Diagnosis and surgical treatment of parosmia**

D.Z. Pitovski and M. Goins

Odorant-induced exacerbation of burning mouth syndrome

A.R. Hirsch

Posters: Olfactory Regeneration**Aprin in rat olfactory epithelium**

E. Weiler and A.I. Farbman

Reduced target ablation-induced macrophage recruitment and activation in MIP-1 knockout mice is restored by MIP-1 injection

M.L. Getchell, K. Kwong, R.A. Vaishnav and T.V. Getchell

Bioinformatic analysis of stem/progenitor cell gene regulation in murine olfactory mucosa following target ablation

T.V. Getchell, R.A. Vaishnav, H. Liu, A.J. Stromberg, K. Kwong and M.L. Getchell

Differential responses to bulbectomy and minocycline-HCl in bax deficient and wild type mice

A.M. Robinson, D.B. Conley and R.C. Kern

OEC dynamics in the olfactory system of methimazole-lesioned and control mice

C.L. Iwema, T. Dodds, J. Chin and C.A. Greer

Early olfactory enrichment decreases TUNEL-positive cells in olfactory bulbs of neonatal rats

C.C. Woo, E.E. Hingco, G.E. Taylor, B.A. Johnson and M. Leon

Caspase 8 activates orn apoptosis following deafferentation and excitotoxic lesion of mouse olfactory bulb

F.W. Fung, C. Carson, M. Saleh, D. Nicholson and J. Roskams

Slide: Odorant Receptors**Comparative genomics of olfactory receptor gene clusters**

J.M. Young, T. Newman, M. Schlador, E. Linardopoulou, M. Walker, J. Hsu, E. Williams and B.J. Trask

Posters: Odorant Receptors**Hands off my endangered species: low allelic variation of sea turtle or genes supports importance of olfactory sense**

M. Vieyra and R.G. Vogt

Expression of candidate gustatory receptor genes in *Anopheles gambiae*

L.B. Kent and H.M. Robertson

Expression of an *Anopheles gambiae* candidate odorant receptor in a subset of distinct sensilla on the proboscis indicates a potential olfactory function

J. Pitts, M. Rützler and L. Zwiebel

Olfactory coding in peripheral organs of *Anopheles gambiae*

H. Kwon and L.J. Zwiebel

Molecular analysis of *Drosophila* odorant receptors

R. Benton and L.B. Vosshall

The sperm 'nose': key role of particulate adenylate cyclase

K. Schwane, M. Spehr, J. Riffell, J. Barbour, R. Zimmer, E.M. Neuhaus and H. Hatt

Chemical communication and the language spoken by sperm and eggs

R. Zimmer, J. Riffell and P. Krug

Mouse testicular olfactory receptors: expression pattern, odorant responsiveness, and regulation of sperm motility

N. Fukuda, K. Yomogida, M. Okabe, H. Kataoka and K. Touhara

Slides: Odorant Receptors**Discovery of acetals, alcohols, and esters as isovaleric acid odor blockers**

M. Qi, D.H. Rogers, C.B. Warren and V. Darmohusodo

HeLa cells designed for functional genomics of odorant receptors and pheromone receptors

E. Shirokova, K. Schmiedeberg, P. Bedner, H. Niessen, K. Willecke, C. Harteneck, J. Ra-guse and D. Krautwurst

Posters: Odorant Receptors**Mechanism for olfactory receptor-odorant interactions**

C.J. Crasto, P.C. Lai, M. Singer and G.M. Shepherd

Can two nostril sniffing help electronic noses?

B.N. Johnson, R.M. Khan and N. Sobel

Characterization of the mechanism of odor sensing in novel DNA-based fluorescent sensors

L.B. Williams, J.S. Kauer and J.E. White

Slides: Taste Genetics and Physiology**Associations between PTC/PROP gene, 6-n-propylthiouracil bitterness and alcohol intake**

V.B. Duffy, A. Davidson, J. Kidd, K. Kidd, W. Speed, A. Pakstis, D. Reed, D. Snyder and L. Bartoshuk

Genetics of PTC taste sensitivity in humans

D. Drayna, U. Kim, S. Wooding, L. Jorde, W. Floriano and W.A. Goddard

Genetic control of lick rate in mice

J. Boughter, S. St. John, R.W. Williams and L. Lu

Intake of sweet and bitter solutions: variation in inbred strains of golden hamsters

M.E. Frank, Y. Wada, J. Makino, M. Mizutani, H. Umezawa, Y. Katsui, T.P. Hettlinger and D.A. Blizard

Responses to ethanol in wild type and α -gustducin knockout mice

V. Danilova, Y. Danilov, S. Damak, R. Margolskee and G. Hellekant

Slides: Pheromones**A *Drosophila* odorant-binding protein mediates responses to a pheromone**

D. Smith, P. Xu, R. Atkinson and D. Jones

Pheromone regulation of a transcription factor in the honeybee brain

C.M. Grozinger and G.E. Robinson

Chemical communication in zebrafish: how pheromones affect female mate choice

G. Gerlach

Slides: Olfactory Development, Disease, and Plasticity**It came from the sea—olfactory adaptations for a terrestrial life in the robber crab (*Birgus latro*)**

M.C. Stensmyr, S. Erland, P. Greenaway and B.S. Hansson

Examination of circadian rhythms in the antenna of the moth***Manduca sexta***

M. Stengl, C. Flecke, J. Schuckel and K.K. Siwicki

Life stage and odorant-induced changes in olfactory sensitivity in coho salmon, *Oncorhynchus kisutch*

A. Dittman, D. May, D. Baldwin and N. Scholz

Defective olfactory development in 3GN1 null mice

G. Schwarting, D. Raitcheva, T. Hennet and T. Henion

Effect of air pollution on olfactory function in residents of Mexico City

R. Hudson, A. Arriola, M. Martínez-Gómez and H. Distel

Olfactory dysfunction occurs in transgenic mice overexpressing human tau protein

R.L. Doty, J. Macknin, K. Kerr, M. Higuchi2, V. Lee and J. Trojanowski

Predator and non-predator odors: similarities in spectral and behavioral patterns

C.A. Lowry and L.M. Kay

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The fine structural distribution G-protein receptor kinase 3, beta-arrestin-2, Ca²⁺/calmodulin-dependent protein kinase II, and phosphodiesterase PDE1C2 in olfactory epithelia

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Immunocytochemical localization of 11 beta-hydroxysteroid dehydrogenase in the mammalian olfactory mucosa

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Localization of retinoic acid receptors in mouse and human nasal epithelium

K.K. Yee, C. Hahn and N.E. Rawson

Immunolocalization of Bex proteins in the mouse brain: colocalization with OMP

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Reduced olfactory epithelium mitotic rate in streptozotocin-induced diabetic rats

J.C. Dennis, S. Swyers, J.C. Wright, E.S. Coleman, R.L. Judd, L. Hoe and E.E. Morrison

Qualitative and quantitative study of cytochrome oxidase staining pattern in olfactory epithelium of neonatal rat

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Functional characterization of CUB-serine protease in the spiny lobster's olfactory organ

M. Johns, P. Tai and C.D. Derby

Exocrine glands containing serine protease are associated with olfactory sensilla in the spiny lobster, *Panulirus argus*

C.D. Derby and M. Schmidt

Functional studies of a serine protease and an amine mono-oxygenase specific to the lobster olfactory organ

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Kv1.3-null mutation alters scaffolding proteins, olfactory bulb biophysics, and glomeruli size/abundance

R.M. Perkins, K. Tucker, M. Meredith and D. Fadool

Multiple roles of TrkB receptor in modulating Kv1.3 ion channel in the olfactory bulb

B.S. Colley, A. Visegrady and D. Fadool

GABAergic periglomerular cells presynaptically inhibit on input to themselves

Z. Shao, G. Szabo, A.C. Puche and M.T. Shipley

Intraglomerular synchronous calcium oscillations of periglomerular cells in the mouse olfactory bulb

F. Jia, G.M. Shepherd and W.R. Chen

Rat olfactory bulb neurons express functional calcium-fluxing AMPA receptors

L.J. Blakemore, M. Resasco and P.Q. Trombley

Rhythmic excitation of EPL interneurons via AMPA/kainate receptors

K.A. Hamilton, T. Heinbockel, A. Hayar, G. Szabo, F. Erdelyi and M. Ennis

Olfactory nerve-evoked metabotropic glutamate receptor-mediated responses in rat olfactory bulb mitral cells

M. Zhu, T. Heinbockel and M. Ennis

Metabotropic glutamate receptors enhance synaptic interactions among juxtglomerular neurons in olfactory bulb glomeruli

A. Hayar, T. Heinbockel, M.T. Shipley and M. Ennis

***In vivo* mouse preparation for olfactory bulb electrophysiology**

T. Mast and E. Griff

Spontaneous activity of main olfactory bulb neurons in the rat

E.R. Griff, J. Stacic and J. Suchanek

Multiunit and field potential recordings in rat olfactory bulb

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Nitric oxide modulates antennal lobe neuron activity in the moth, *Manduca sexta*, through soluble guanylyl cyclase-dependent mechanisms

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Octopamine-immunoreactive neurons in the olfactory and gustatory centers in the brain of *Manduca sexta*

A. Dacks, T. Christensen and J.G. Hildebrand

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Memantine and mecamylamine alter nicotine perception in man

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Polymorphisms of known monosodium glutamate taste receptors and bimodal distribution of sensitivity to glutamate savory taste

S.M. Alarcon, K.J. Mascioli, D. Reed, R. Keast, C. Tharp, S. Lui, O. Ahmed and P. Breslin

Glutamate- and inosine-induced calcium responses in mouse taste receptor cells

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Can your nose shine an attentional spotlight?

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Intensity of retronasal and orthonasal odorants: time-intensity tracking

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Discriminating deuterated from undeuterated acetophenone: comparing humans and a dog

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Restrained eaters show smaller N1P3 amplitudes and suppression of attention to chocolate odor

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Mixture segmentation: are two nostrils better than one?

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