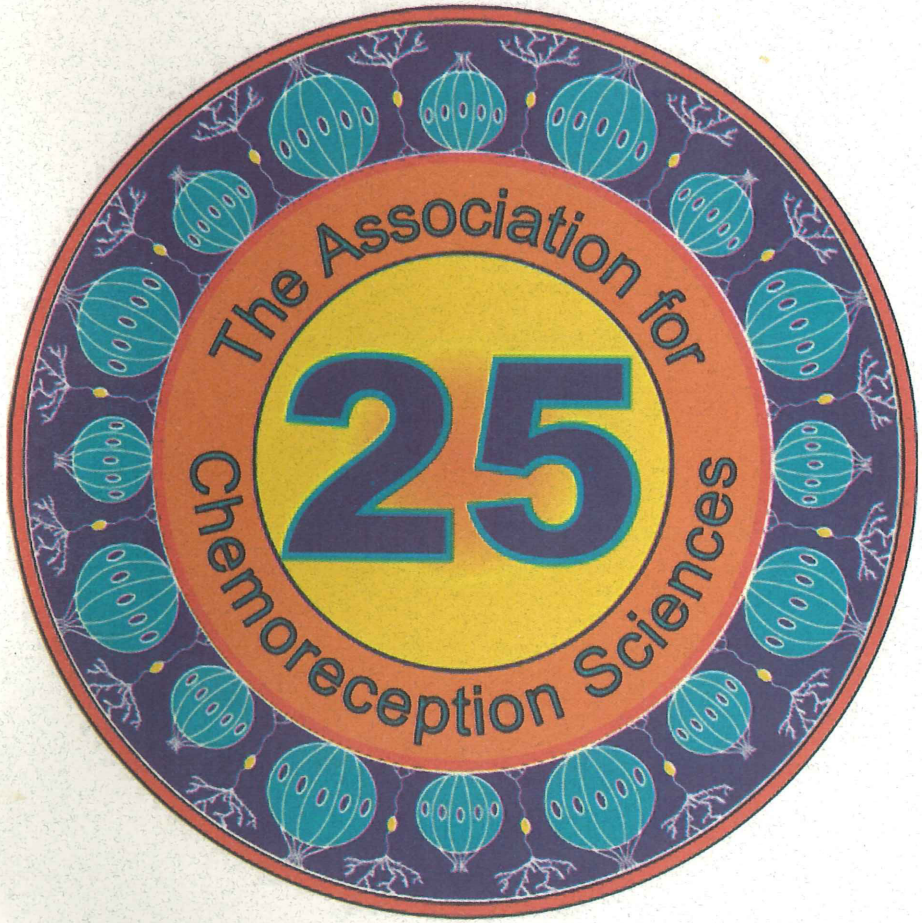
April 21-25, 2004
April 13-17, 2005

Program



AChemS 25th Annual Meeting

April 9-13, 2003 • Sarasota, Florida

The Association for Chemoreception Sciences appreciates grant support from

The National Institute on Deafness and Other Communication Disorders, National Institutes of Health

AChemS is also grateful for the generous support of its Corporate Sponsors:

Twenty Fifth Annual Givaudan Lectureship
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Eighteenth Annual Takasago Award for Research in Olfaction
Takasago Corporation

Twelfth Annual Moskowitz Jacobs Award for Research in the Psychophysics of Taste and Olfaction
Moskowitz Jacobs, Inc.

Tenth Annual Ajinomoto Award to Promising Young Researcher In the Field of Gustation
Ajinomoto USA

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* * *

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Wednesday, April 9, 2003

ASSOCIATION FOR CHEMORECEPTION SCIENCES

25th ANNUAL MEETING

Wednesday, April 9, 2003

10:00 AM - Noon	**Educational Outreach** *(GWIZ Science Center)*
	Organizer: Scott Herness
Noon - 3:30 PM	**Executive Committee** *(Executive Board Room)*
5:00-7:30 PM	**Registration** *(Prefunction Area)*
6:30-8:00 PM	**Opening Buffet** *(Salons A,B)*
8:00-8:30 PM	**Welcome, Opening Remarks, Awards Ceremony** *(Salons C D,E,F)*
8:30-9:30 PM	**GIVAUDAN LECTURE** *(Salon C,D,E,F)*

Dr. Bert Hoelldobler

(Theodor Boveri-Institut, University of Wuerzburg, Germany)

Multicomponent Signals in Ant Communication

9:30-10:30 PM	**Organizational Meeting for Students with Travel Awards** *(Salon G) (Organizer: Scott Herness)*
9:30-10:30 PM	**AChemS-25th Celebration, Social Gathering, & Cash Bar** *(Prefunction Area)*

Thursday, April 10, 2003

Morning Coffee 7:30-9:00 AM *(Prefunction Area)*

SLIDES

Thursday - 8:00 AM - 9:45 AM *(Salons C, D, E, F)*

Animal Behavior & Olfaction *(Chairperson: Paul Moore)*

8:00 2 PHEROMONAL MESSAGES BY MALE ASIAN ELEPHANTS: HONEY OR FRONTALIN?
Rasmussen L.E.[1], Riddle H.S.[2], Greenwood D.R.[3] *[1]Biochemistry, Oregon Graduate Institute of Science & Technology, Beaverton, Oregon; [2]Riddle's Elephant Sanctuary, Greenbrier, AR; [3]Gene Technologies, HortResearch, Auckland, New Zealand*

8:15 3 SEX AND THE SINGLE CELL: MECHANISMS OF SPERM CHEMOATTRACTION IN LAMINAR SHEAR FLOWS
Riffell J.A.[1], Zimmer R.K.[2] *[1]Biology, University of California, Los Angeles, CA; [2]Biology, Neurosciences Program and Brain Research Institute, University of California, Los Angeles, CA*

8:30 4 OLFACTORY INVESTIGATION OF CONSPECIFIC ODORS IN THE OPOSSUM *MONODELPHIS DOMESTICA* .
Zuri I., Su W., Halpern M. *Anat. & Cell Biol., SUNY Downstate Health Sciences Center, Brooklyn, NY*

8:45 5 RABBIT PUPS CAN ORIENT TO THE NEST BY SMELL FROM BIRTH
Hudson R.[1], Garay-Villar E.[2], Maldonado M.[2], Coureaud G.[3] *[1]Biologia Celular y Fisiología, Instituto de Investigaciones Biomedicas UNAM, Mexico; [2]Biología Celular y Fisiología, Instituto de Investigaciones Biomedicas UNAM, Mexico; [3]Ethology and Sensory Psychobiology, Centre Europeen des Sciences du Gout, Dijon, France*

9:00 6 PROLONGED EXPOSURE TO SOCIAL ODORS ALTERS SUBSEQUENT SOCIAL INTERACTIONS IN CRAYFISH
Bergman D.A., Moore P.A. *Biological Sciences, Bowling Green State University, Bowling Green, OH*

9:15 7 MODULATION OF OLFACTORY ACUITY IN MICE: EFFECTS OF STIMULUS CONCENTRATION
Cleland T.A., Narla V.A. *Dept. Neurobiology & Behavior, Cornell University, Ithaca, NY*

9:30 8 CONFIGURATIONAL AND NON-CONFIGURATIONAL INTERACTIONS BETWEEN ODORANTS IN BINARY MIXTURES
Linster C., Wiltrout C., Dogra S. *Neurobiology and Behavior, Cornell University, Ithaca, NY*

Mid morning coffee available 9:30-10:00 AM *(Prefunction Area)*

SYMPOSIUM

Thursday - 10:00 AM - 12:15 PM *(Salons C D,E,F)*

In Sync: Temporal Coding & Encoding Time in the Olfactory System

Chairpersons: Thomas Christensen and John Caprio

10:00 9 IN SYNC: TEMPORAL CODING AND ENCODING TIME IN THE OLFACTORY SYSTEM
Christensen T.A.[1], Caprio J.T.[2] *[1]ARL Division of Neurobiology, University of Arizona, Tucson, AZ; [2]Zoology and Physiology, Louisiana State University, Baton Rouge, LA*

10:05 10 SYNCHRONOUS ACTIVITY IN THE VISUAL SYSTEM: HISTORY AND CURRENT STATUS
Gray C. *Montana State University, Bozeman, MT*

10:35 11 LEARNING ABOUT ODORS WITH OSCILLATIONS AND WAVES
Gelperin A. *Monell Chemical Senses Center, Philadelphia, PA*

11:05 12 SPATIO-TEMPORAL DYNAMICS OF RECEPTOR NEURON INPUT TO THE MAMMALIAN OLFACTORY BULB
Spors H.[1], Wachowiak M.[2], Cohen L.B.[2], Friedrich R.W.[1] *[1]Max-Planck-Institute for Medical Research, Heidelberg, Germany; [2]Physiology, Yale University, New Haven, CT*

11:35 13 CENTRAL ENCODING OF OLFACTORY INFORMATION THROUGH TRANSIENT, NON-OSCILLATORY SYNCHRONIZATION OF NEURAL ENSEMBLES
Lei H., Christensen T.A., Hildebrand J.G. *ARL Division of Neurobiology, University of Arizona, Tucson, AZ*

This symposium was sponsored in part by a grant from the National Institute on Deafness and Other Communication Disorders

ACHEMS-25th ANNIVERSARY POSTER SESSION

(Organizers: Rich Costanzo and Michael Meredith)

This special poster session will highlight the contributions of some the past leading researchers in the chemical senses, including Donald Tucker, Carl Pfaffman, and others. The posters will be on display for the entire meeting

POSTERS

Thursday - 8:00 AM-Noon *(Salons A,B,G,H)*

Olfactory Neurogenesis & Cell Death

P1 14 MATRIX METALLOPROTEINASE EXPRESSION IN THE OLFACTORY EPITHELIUM
Tsukatani T.[1], Fillmore H.[2], Hamilton H.[2], Holbrook E.[3], Costanzo R.M.[3] *[1]Otorhinolaryngology, Kanazawa University, Kanazawa, Japan; [2]Surgery, Virginia Commonwealth University, Richmond, VA; [3]Physiology, Virginia Commonwealth University, Richmond, VAa*

P2 15 BIOCHEMICAL CHARACTERIZATION OF CELL SURFACE ANTIGEN OF GLOBOSE BASAL CELLS
Jang W., Schwob J.E. *Anatomy and Cellular Biology, Tufts University, Boston, MA*

P3 16 QUIESCENT GLOBOSE BASAL CELLS ARE PRESENT IN THE OLFACTORY EPITHELIUM
Chen X., Schwob J.E. *Anatomy & Cellular Biology, Tufts University School of Medicine, Boston, MA*

P4 17 HEME OXYGENASE-1 AND HEME OXYGENASE-2 HAVE DIFFERENT ROLES IN THE REGENERATION OF OLFACTORY RECEPTOR NEURONS AFTER DETERGENT ABLATION
Tu Y.[1], Chen J.[1], Moon C.[1], Ronnett G.V.[2] *[1]Neuroscience, The Johns Hopkins University School of Medicine, Baltimore, MD; [2]Neuroscience and Neurology, The Johns Hopkins University School of Medicine, Baltimore, MD*

P5 18 NITRIC OXIDE INDUCES CELL PROLIFERATION DURING THE NEUROGENESIS OF RAT OLFACTORY EPITHELIUM *IN VITRO*.
Sülz L.[1], Mackay-Sim A.[2], Ferón F.[2], Iturriaga R.[1], Bacigalupo J.[3] *[1]Facultad de Ciencias Biológicas, Universidad Católica de Chile, Santiago, Chile; [2]Griffith University, Brisbane, Queensland, Australia; [3]Millenium Institute CBB, Facultad de Ciencias, Universidad de Chile, Santiago, Chile*

P6 19 CELL PROLIFERATION AND GROWTH IN *MANDUCA SEXTA* ANTENNAL IMAGINAL DISCS
Fernandez K.A., Kobres R.P., Vogt R.G. *Biological Sciences, University of South Carolina, Columbia, SC*

P7 20 FUNCTIONAL ASPECTS OF NEUROGENESIS IN THE ADULT OLFACTORY BULB
Belluzzi O.[1], Benedusi M.[1], Ackman J.[2], Loturco J.J.[2] *[1]Biology - Sect. Physiology & Biophysics, Universita' di Ferrara, Ferrara, Italy; [2]Physiology and Neurobiology, University of Connecticut, Storrs, CT*

P8 21 NEUROGENESIS IN THE CENTRAL OLFACTORY PATHWAY OF ADULT DECAPOD CRUSTACEANS: IDENTIFICATION OF NEUROBLASTS
Schmidt M. *Biology, Georgia State University, Atlanta, GA*

P9 22 CIRCADIAN RHYTHMICITY TO NEUROGENESIS IN THE OLFACTORY ORGAN AND BRAIN OF SPINY LOBSTERS
Horner A.J., Nduku V., Vu V., Harrison P.J.H., Derby C.D. *Biology, Georgia State University, Atlanta, GA*

P10 23 PACAP INHIBITS ORN APOPTOSIS AND REDUCES TRANSIENT K CURRENT THROUGH DIFFERENT INTRACELLULAR PATHWAYS.
Han P., Hegg C.C., Lucero M.T. *Physiology, University of Utah, Salt Lake City, Utah*

P11 24 APOPTOSIS IN THE VOMERONASAL SENSORY EPITHELIUM IN ADULT RATS
Jia C., Halpern M. *Anatomy & Cell Biology, State University of New York Health Science Center at Brooklyn, Brooklyn, NY*

P12 25 INHIBITION OF ORN APOPTOSIS IN THE BAX KNOCKOUT MOUSE
Robinson A.M., Conley D.B., Kern R.C. *Otolaryngology-HNS, Northwestern University, Chicago, IL*

P13 26 CELLULAR SENESCENCE IN HUMAN OLFACTORY CULTURES
Peoples R., Patel K., Gomez G., Rawson N. *Monell Chemical Senses Center, Philadelphia, PA; [2]University of Scranton, Scranton, PA*

Development of Gustatory Systems

P14 27 PERSISTENT SIGNALS FROM THE NOTOCHORD ENHANCE EMBRYONIC TASTE BUD DEVELOPMENT.
Barlow L.A., Calabrese D.W. *Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO*

P15 28 THE ROLE OF EPITHELIAL-MESENCHYMAL INTERACTIONS IN THE DEVELOPMENT OF MURINE TASTE PAPILLAE
Yuskaitis C.J., Barlow L.A. *Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO*

P16 29 ALTERATION OF FUNGIFORM PAPILLA PATTERN INDUCED BY BRIEF DISRUPTION OF SHH SIGNALING
Liu H.X., Maccallum D.K., Mistretta C. *Dentistry, University of Michigan, Ann Arbor, MI; [2]Medical School, University of Michigan*

P17 30 EXPRESSION OF BDNF, NGF AND PGP 9.5 IN TASTE BUDS FOLLOWING GLOSSOPHARYNGEAL NERVE SECTION IN MICE
Yee C.L., Finger T.E. *Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO*

P18 31 EPITHELIAL OVEREXPRESSION OF BDNF AND NT4 EACH PRODUCES DISTINCT SPATIAL PATTERNS OF ALTERED CHORDA TYMPANI INNERVATION.
Lopez G.F., Krimm R.F. *Anatomical Sciences, University of Louisville School of Medicine, Louisville, KY*

P19 32 EFFECTS OF SODIUM CHANNEL BLOCKERS ON NEUROTROPHIN - INDUCED NEURITE OUTGROWTH IN EMBRYONIC TRIGEMINAL GANGLION
Bai L.[1], MacCallum D.[2], Mistretta C.[1] *[1]School of Dentistry, University of Michigan, Ann Arbor, MI; [2]Medical School, University of Michigan*

P20 33 BDNF GENE REPLACEMENT REVEALS MULTIPLE MECHANISMS FOR ESTABLISHING NEUROTROPHIN SPECIFICITY DURING SENSORY NERVOUS SYSTEM DEVELOPMENT
Nosrat C.A.[1], Agerman K.[2], Hjerling-Leffler J.[2], Ernfors P.[2] *[1]Laboratory of Oral Neurobiology, Biologic & Materials Sciences, University of Michigan, Ann Arbor, MI; [2]Unit of Molecular Neurobiology, MBB, Karolinska Instituteet, Stockholm, Sweden*

P21 34 GOLGI ANALYSIS OF NEURONS IN THE NUCLEUS OF THE SOLITARY TRACT OF NEONATAL CHORDA TYMPANI TRANSECTED RATS
Sollars S.I., Engelhardt P.E. *Psychology, University of Nebraska, Omaha*

Gustatory Processing

P22 35 COMPARISON OF TEMPORAL PROFILES OF SINGLE FIBER RESPONSES IN CHORDA TYMPANI (CT) AND GLOSSOPHARYNGEAL (NG) NERVES IN C57BL/6J MICE
Danilov Y., Danilova V., Hellekant G. *University of Wisconsin, Madison, WI*

P23 36 EVOKED RESPONSES TO ELECTRICAL STIMULATION OF THE GLOSSOPHARYNGEAL NERVE IN THE NUCLEUS OF THE SOLITARY TRACT IN THE RAT
Hallock R.M., Di Lorenzo P.M. *Psychology, State University of New York at Binghamton, Binghamton, NY*

P24 37 A SIMPLE MODEL OF A TASTE-RESPONSIVE CELL IN THE BRAINSTEM PREDICTS THE EFFECTS OF ADAPTATION
Di Lorenzo P.M., Hallock R.M. *Psychology, State University of New York at Binghamton, Binghamton, NY*

P25 38 CHARACTERIZATION OF EFFERENT AND AFFERENT PROJECTIONS OF CTA-INDUCED FLI CELLS IN INTS
Spray K.J.[1], Bernstein I.L.[2] *[1]Biology, Utah State University, Logan, UT; [2]Psychology, University of Washington, Seattle, WA*

P26 39 SOME ROSTRAL NST NEURONS THAT EXPRESS FOS AFTER TASTE NERVE STIMULATION ARE PBN-PROJECTING NEURONS
Harrison T., Rajappa P., Smith-Adams L.B. *Anatomy & Cell Biology, East Tennessee State University College of Medicine, Johnson City, TN*

P27 40 IN VIVO INTRACELLULAR RECORDING OF GUSTATORY NEURONS IN HAMSTER SOLITARY NUCLEUS
Li C.S., Li C.X., Waters R.S., Smith D.V. *Anatomy & Neurobiology, University of Tennessee Health Science Center, Memphis, TN*

P28 41 PROJECTIONS OF NST NITRERGIC NEURONS
Travers S.P., Shiroor C. *Oral Biology, Ohio State Univ., Columbus, OH*

P29 42 MORPHOLOGY OF THE RAT PARASYMPATHETIC SECRETOMOTOR NEURONS CONTROLLING THE PAROTID AND VON EBNER'S SALIVARY GLANDS
Kim M.[1], Bradley R.M.[2], Chiego Jr D.J.[3] *[1]Nursing, Chonnam University, Gwangju, Korea; [2]Biologic & Materials Sciences, University of Michigan, Ann Arbor, MI; [3]Cariology, University of Michigan*

P30 43 BIOPHYSICAL AND MORPHOLOGICAL PROPERTIES OF BRAINSTEM PARASYMPATHETIC NEURONS CONTROLLING VON EBNER'S GLANDS
Fukami H., Chiego Jr. D.J., Bradley R.M. *Biologic & Materials Sciences, University of Michigan, Ann Arbor, MI*

P31 44 TASTE, TEXTURE AND TEMPERATURE REPRESENTATION IN THE PRIMATE ROSTRAL INSULAR AND FRONTAL OPERCULAR CORTEX
Kadohisa M., Rolls E.T., Verhagen J.V. *Exp Psychology, University of Oxford, Oxford, United Kingdom*

P32 45 OTITIS MEDIA INFLUENCES BODY MASS INDEX BY INTERACTING WITH SEX, AGE, AND TASTE PERCEPTION
Snyder D.J.[1], Duffy V.B.[2], Chapo A.K.[1], Hoffman H.J.[3], Bartoshuk L.M.[1] *[1]Surgery, Yale University, New Haven, CT; [2]Dietetics, University of Connecticut, Storrs, CT; [3]NIDCD, Bethesda, MD*

Sweet Taste

P33 46 BEHAVIORAL, NEURAL AND MOLECULAR GENETIC STUDIES ON THE DPA (D-PHENYLALANINE SENSITIVITY) LOCUS IN MICE
Shigemura N.[1], Nakashima K.[2], Kawato Y.[3], Ninomiya Y.[1] *[1]Section of Oral Neuroscience, Graduate School of Dental Science, Kyushu University, Fukuoka, Japan; [2]Department of Chemistry, Asahi University School of Dentistry, Gifu, Japan; [3]Bio-oriented Technology Research Advancement Institution (BRAIN), Saitama, Japan*

P34 47 NOVEL TRANSDUCTION PATHWAY FOR THE ARTIFICIAL SWEETENER, ACESULFAME-K, POTENTIALLY UTILIZES A TRP MEDIATED CHLORIDE CURRENT.
Zhao F., Lu S., Herness S. *College of Dentistry, Ohio State University, Columbus, OH*

P35 48 STARCH-BASED FLAVOR FILMS: A NOVEL METHOD FOR WHOLE MOUTH STIMULATION WITH PRECISE STIMULUS AMOUNTS
Flammer L.J.[1], Sondrup J.[2], Grainger B.[2], Alvarez-Reeves M.[3], Green B.[4]
[1]Global Sensory & Consumer Science, International Flavors & Fragrances, Inc., Union Beach, NJ; [2]International Flavors & Fragrances, Inc.; [3]The John B. Pierce Laboratory, New Haven, CT; [4]The John B. Pierce Laboratory and Yale School of Medicine, New Haven, CT

P36 49 SWEET AND SOUR PREFERENCES IN YOUNG CHILDREN AND ADULTS: ROLE OF REPEATED EXPOSURE
Liem D., Van Den Elshout J., Lam K., De Graaf K. *Human Nutrition, Wageningen University, Wageningen, Netherlands*

P37 50 INDIVIDUAL DIFFERENCES IN SWEET PREFERENCES ACROSS THE LIFESPAN
Pepino M.Y., Kennedy J.M., Currier M.P., Mennella J.A. *Monell Chemical Senses Center, Philadelphia, PA*

P38 51 APPARENT SPECIFIC VOLUMES (ASVS) OF CYCLAMATES AND OTHER SULFAMATE SWEETENERS
Haywood K.A.[1], Spillane W.J.[2], Hanniffy G.[2], Coyle C.[3], Birch G.G.[4]
[1]Food Biosciences, Reading, U.K.; [2]Chemistry, NUI, Galway, Galway, Ireland; [3]Chemistry, NUI, Galway, Ireland; [4]Food Biosciences, University of Reading, U.K.

Bitter Taste

P39 52 SOLUTION PROPERTIES AND THE ROLE OF WATER IN THE INHIBITION OF BITTERNESS IN MIXTURES OF SWEET AND BITTER MOLECULES
Portmann M.[1], Aroulmoji V.[2], Liu J.[3], Mathlouthi M.[2] *[1]NPD, GlaxoSmithKline Consumer Healthcare, Weybridge, Surrey, United Kingdom; [2]Laboratoire de Chimie Physique Industrielle, Universite de Reims, Reims, France; [3]NPD, GlaxoSmithKline Consumer Healthcare, Parsippany, NJ*

P40 53 BITTERNESS INHIBITION OF BINARY MIXTURES OF BITTER COMPOUNDS BY SODIUM SALTS
Canty T.M., Keast R.S., Breslin P.A. *Monell Chemical Senses Center, Philadelphia, PA*

P41 54 PERCEPTION OF BITTERNESS FROM CAPSAICIN, PIPERINE AND ZINGERONE
Green B., Hayes J. *John B. Pierce Laboratory, New Haven, CT*

P42 55 SENSITIVITY FOR PROP AND BASIC TASTES IN YOUNG AND ELDERLY MALE AND FEMALE SUBJECTS
Mojet J. *Agrotechnologisch Research Institute (ATO), Wageningen, Netherlands*

P43 56 GENETIC STUDIES OF PTC TASTE IN HUMANS
Drayna D.[1], Kim U.[2], Jorgenson E.[3], Risch N.[3], Coon H.[4], Leppert M.[5]
[1]National Institutes of Health, Rockville, MD; [2]NIDCD/NIH, Rockville, MD; [3]Genetics, Stanford University, Stanford, CA; [4]Psychiatry, University of Utah, Salt Lake City, UT; [5]Genetics, University of Utah, Salt Lake City, UT

P44 57 PROP BITTERNESS ASSOCIATES WITH DIETARY FAT BEHAVIORS AND RISK FOR CARDIOVASCULAR DISEASE (CVD) IN MIDDLE-AGED WOMEN
Hutchins H.L., Healy N.A., Duffy V.B. *Dietetics, University of Connecticut, Storrs, CT*

Trigeminal Chemoreception & Irritation

P45 58 REAL-TIME MONITORING OF NASAL MUCOSAL PH DURING CO_2 STIMULATION: A PILOT STUDY
Avila P.C., Shusterman D.J. *Medicine, University of California, San Francisco, San Francisco, CA*

P46 59 CARBONIC ANHYDRASE GENE EXPRESSION IN THE HUMAN NASAL MUCOSA: A PILOT DESCRIPTIVE STUDY
Tarun A.[1], Bryant B.[2], Shusterman D.J.[1] *[1]Medicine, University of California, San Francisco, San Francisco, CA; [2]Neurophysiology, Monell Chemical Senses Center, Philadelphia, PA*

P47 60 IDENTIFICATION OF TRIGEMINAL SUBPOPULATIONS DIFFERING IN THEIR P2X-RECEPTOR EXPRESSION
Paul J., Spehr M., Hatt H., Wetzel C.H. *Ruhr-University Bochum, Bochum, Germany*

P48 61 LACK OF QUININE-EVOKED ACTIVITY IN RAT TRIGEMINAL SUBNUCLEUS CAUDALIS
Simons C.[1], Boucher Y.[2], Carstens E.[1] *[1]Neurobiology, Physiology and Behavior, University of California, Davis, CA; [2]UFR Odontologie, Universite Paris 7, France*

P49 62 TRIGEMINAL RESPONSES TO BITTER-TASTING SUBSTANCES APPLIED TO THE NASAL CAVITY
Silver W.L.[1], Alimohammadi H.[1], Anderson K.T.[2], Bottger B.[2], Hansen A.[2], Finger T.E.[2] *[1]Biology, Wake Forest University, Winston-Salem, NC; [2]Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO*

P50 63 CONTRIBUTION OF VANILLOID RECEPTOR-EXPRESSING FIBERS TO OVERALL TRIGEMINAL NERVE CHEMOSENSITIVITY
Alimohammadi H., Silver W.L. *Biology, Wake Forest University, Winston-Salem, NC*

P51 64 INVESTIGATION OF THE CENTRAL TOPOLOGY OF SENSORY TRIGEMINAL FIBERS INNERVATING THE NASAL MUCOSA
Damann N.[1], Klopfleisch R.[2], Teifke J.P.[2], Klupp B.[2], Hatt H.[1], Mettenleiter T.C.[2], Wetzel C.H.[1] *[1]Lehrstuhl fuer Zellphysiologie, Ruhr-Universitaet, Bochum, Germany; [2]Friedrich-Loeffler-Institute, Bundesforschungsanstalt für Viruskrankheiten der Tiere, Insel Riems, Germany*

P52 65 ACTIVATION OF BRAIN STEM NEURONS BY IRRITANT CHEMICAL STIMULATION OF THE THROAT ASSESSED BY C-FOS IMMUNOHISTOCHEMISTRY
Cuellar J.M.[1], Boucher Y.[2], Simons C.T.[1], Jung S.[3], Iodi Carstens M.[1], Carstens E.[1] *[1]Neurobiology, Physiology and Behavior, University of California, Davis, CA; [2]Laboratoire de Physiologie de la Manducation, University Paris 7, France; [3]Anesthesiology, Keimyung University, Daegu, Korea*

P53 66 ASSESSMENT OF VARIATION IN NASAL SUBMUCOSAL BLOOD FLOW USING LASER-DOPPLER FLOWMETRY WITH RHINOSTEROMETRY
Konnerth C., Opiekun R., Gould M., Dalton P. *Monell Chemical Senses Center, Philadelphia, PA*

P54 67 CHEMESTHESIS FROM ALKALINE DUSTS: DISSOLUTION IN MUCUS AND COURSE OF SENSATION
Cain W.S.[1], Jalowayski A.A.[1], Kleinman M.[2], Schmidt R.[1], Hillen B.K.[1], Magruder K.[1], Lee B.R.[1], Culver B.D.[3] *[1]Chemosensory Perception Lab., Surgery, University of California, San Diego, La Jolla, CA; [2]Particle Inhalation Lab., Commun. & Environ. Medicine, UCI, Irvine, CA; [3]Epidem. Div., Medicine, UCI, Irvine, CA*

P55 68 EFFECT OF SALIVA COMPOSITION ON TEXTURE PERCEPTION OF MAYONNAISE
Engelen L.[1], Van Den Keybus P.A.[2], De Wijk R.A.[3], Bosman F.[1] *[1]Head and Neck, University Medical Centre Utrecht, Utrecht, Netherlands; [2]Oral Biology, Academic Centre for Dentistry, Amsterdam, Netherlands; [3]Marketing Research & Sensory Science, ATO, Wageningen, Netherlands*

P56 69 ASSESSMENT OF THRESHOLDS FOR TRIGEMINALLY MEDIATED SENSATIONS
Frasnelli J., Hummel T. *ENT-Department, University of Dresden Medical School, Dresden, Germany*

P57 70 QUANTITATIVE AND QUALITATIVE STIMULUS INTERACTIONS AMONG NASAL MUCOSAL IRRITANTS
Shusterman D.J. *Medicine, University of California, San Francisco, CA*

P58 71 DEVELOPMENT OF AN OCULAR EXPOSURE DEVICE FOR DETECTION OF IRRITATION THRESHOLDS: THE TIDE SYSTEM
Opiekun R.E., McDermott R., Dalton P. *Chemosensory, Monell Chemical Senses Center, Philadelphia, PA*

Sensory Evaluation & Consumer Research

P59 72 THE EFFECTS OF ODOR ON WEIGHT PERCEPTION
Allen E.T. *Taste and Smell Research and Treatment Foundation, Chicago, IL*

P60 73 TEENAGE ABILITY TO DISCRIMINATE CAFFEINE IN COMMERCIAL SODA
Hirsch A.R.[1], Lu H.H.[2], Ma A.[2] *[1]Neurology and Psychiatry, The Smell & Taste Treatment and Research Foundation, Chicago, Illinois; [2]Science, [4]Illinois Mathematics and Science Academy, Aurora, IL*

P61 74 EFFECTS OF ODORANT ADMINISTRATION ON OBJECTIVE AND SUBJECTIVE MEASURES OF SLEEP QUALITY, POST-SLEEP MOOD AND ALERTNESS, AND COGNITIVE PERFORMANCE
Raudenbush B., Koon J., Smith J., Zoladz P. *Psychology, Wheeling Jesuit University, Wheeling, WV*

P62 75 TREATING USED MUSHROOM "SOIL" TO CONTROL ODORS DURING COMPOSTING
Wysocki C.J.[1], Heinemann P.H.[2], Graves R.E.[2], Beyer D.M.[2], Louie J.[1], Kim J.J.[1], Preti G.[1] *[1]Monell Chemical Senses Center, Philadelphia, PA; [2]Department of Agricultural and Biological Engineering, Pennsylvania State University, University Park, PA*

Cash Lunch Carts Available, Noon-1:30 PM *(Prefunction Area)*

Minority & Clinical Travel Awardee Luncheon, 12:30-2:00 PM *(Executive Board Room)* *Organizer: Kennedy Wekesa*

NIH Workshop: Funding Opportunities for New Investigators, 3:30-5:00 PM *(Salons C, D, E, F)*
Organizer: Barry Davis, NIDCD

SLIDES

Thursday - 7:00-8:15 PM *(Salons C,D,E,F)*

Human Psychophysics: Taste and Trigeminal

Chairperson: Wilhelm Pickenhagen

7:00 76 INHIBITION OF SWEET TASTE BY ZINC
Keast R.S., Canty T.M., Breslin P.A. *Monell Chemical Senses Center, Philadelphia, PA*

7:15 77 IMMEDIATE AND DELAYED TASTE CONTRAST IN YOUNGER AND OLDER ADULTS
Specht S.M., Alberico K.F., Maher J.D., Mastrangelo L.E. *Psychology, Utica College, Utica, NY*

7:30 78 TEMPORAL PROCESSING OF TASTE MIXTURES LIMITS THE IDENTIFICATION AND ORDER OF PERCEPTION OF COMPONENTS
Laing D.G., Marshall K., Jinks A., Effendy J., Hutchinson I. *Centre For Advanced Food Research, University of Western Sydney, Richmond, Australia*

7:45 79 DEGREE OF DOSE ADDITION IN CHEMOSENSORY DETECTABILITY OF MIXTURES: A WINDOW INTO THE BREADTH OF CHEMICAL TUNING IN CHEMORECEPTION
Cometto-Muniz J.E.[1], Cain W.S.[1], Abraham M.H.[2] *[1]Surgery (Otolaryngology), University of California, San Diego, La Jolla, CA; [2]Chemistry, University College London, London, United Kingdom*

8:00 80 TIME-INTENSITY RATINGS OF NASAL IRRITATION FROM CARBON DIOXIDE
Wise P., Radil T., Wysocki C.J. *Monell Chemical Senses Center, Philadelphia, PA*

Ev

Evening break 8:00-8:30 PM *(Prefunction Area)*

SYMPOSIUM

Thursday - 8:30-10:30 PM *(Salons C,D,E,F)*

Hanging by a Thread: Scaffolds in Signal Transduction

Chairpersons: Judith Van Houten and Timothy McClintock

8:30 INTRODUCTION TO "HANGING BY A THREAD: SCAFFOLDS IN SIGNAL TRANSDUCTION
Van Houten, J. *University of Vermont, Burlington, VT*

8:35 81 TARGETING AND SCAFFOLDING OF EPITHELIAL RECEPTORS AND ION CHANNELS
Milgram S.L. *Cell and Developmental Biology, University of North Carolina at Chapel Hill, Chapel Hill, NC*

9:10 82 A CHOLESTEROL REGULATED PP2A/HEPTP COMPLEX WITH DUAL SPECIFIC ERK1/2 PHOSPHATASE ACTIVITY
Anderson R.G. *Cell Biology and Neuroscience, University of Texas Southwestern Medical Center at Dallas, Dallas, TX*

9:45 83 MOLECULAR SCAFFOLDS AND INTERACTING PROTEINS AFFECT ION CHANNEL FUNCTION IN THE OLFACTORY SYSTEM
Fadool D.A. *Prog. in Neurosci. & Mol. Biophysics, Florida State University, Tallahassee, FL*

This symposium was sponsored in part by a grant from the National Institute on Deafness and Other Communication Disorders

POSTERS

Thursday - 7:00-11:00 PM *(Salon A,B,G,H)*

Chemical Ecology

P1 84 ESCAPIN: AN ANTIPREDATOR PROTEIN IN THE DEFENSIVE SECRETION OF *APLYSIA CALIFORNICA*
Johnson P.M., Yang H., Tai P.C., Derby C.D. *Biology, Georgia State University, Atlanta, GA*

P2 85 FEEDING RESPONSES TO SELECTED TREE SPECIES AND PHYTOCHEMICALS BY GYPSY MOTH LARVAE, *LYMANTRIA DISPAR* (L.)
Shields V.D., Broomell B.P., Rodgers E.J., Salako J.O., Dodson L.K., Agbasi K.T. *Biological Sciences, Towson University, Towson, MD*

P3 86 CO_2 EMISSION BY DATURA FLOWERS AND ITS SIGNIFICANCE FOR FORAGING *MANDUCA SEXTA* MOTHS
Thom C.[1], Guerenstein P.G.[1], Yepez E.[2], Mechaber W.L.[1], Vanharen J.[3], Hildebrand J.G.[1], Williams D.[2] *[1]ARL Division Of Neurobiology, University of Arizona, Tucson, AZ; [2]School of Renewable Natural Resources, University of Arizona, Tucson, AZ; [3]Biosphere-2 Center, Oracle, AZ*

P4 87 LIFE STAGE AND ODORANT-INDUCED CHANGES IN OLFACTORY SENSITIVITY IN COHO SALMON, *ONCORHYNCHUS KISUTCH*
Dittman A., Baldwin D., May D., Scholz N. *Northwest Fisheries Science Center, Seattle, WA*

P5 88 CARBOHYDRATE SENSITIVITY OF CRAYFISH (*PROCAMBARUS CLARKII*) LEG CHEMORECEPTOR CELLS
Corotto F.S., Fant M.J. *Department of Biology, North Georgia College and State University, Dahlonega, GA*

P6 89 GROWING CRAYFISH ON DIFFERENT DIETS ALTERS SUBSEQUENT FORAGING DECISIONS: THE IMPACT OF DETRITUS AND FISH DIETS ON CHEMOSENSORY DECISIONS
Adams J.A.[1], Tuchman N.C.[2], Moore P.A.[1] *[1]Biological Sciences, Bowling Green State University, Bowling Green, OH; [2]Biology, Loyola University of Chicago, Chicago, IL*

P7 90 THE EFFECTS OF THE HERBICIDE METOLACHLOR ON AGNOSTIC BEHAVIOR IN THE CRAYFISH *ORCONECTES RUSTICUS*
Cook M.E., Moore P.A. *Biological Sciences, Bowling Green State University, Bowling Green, OH*

P8 91 THE SCENT OF SPECIATION: PERIPHERAL CHEMORECEPTION IN THE *RHAGOLETIS* SPECIES COMPLEX
Olsson S.B.[1], Linn, Jr. C.E.[2], Roelofs W.L.[2] *[1]Neurobiology and Behavior, Cornell University, Ithaca, NY; [2]Entomology, NYS Agricultural Experiment Station, Cornell University, Geneva, NY*

P9 92 HUMAN SKIN ODORS
Preti G.[1], Bazemore R.[1], Leyden J.J.[2], Foglia A.[2], Smith J.M.[1], Spielman A.I.[3] *[1]Monell Chemical Senses Center, Philadelphia, PP; [2]Dermatology, University of Pennsylvania, Philadelphia, PA; [3]College of Dentistry, Basic Science Division, New York University, New York, NY*

Olfactory CNS Processing

P10 94 DENDRITIC CALCIUM PLATEAU POTENTIAL IN JUXTAGLOMERULAR CELLS IN THE RAT OLFACTORY BULB
Zhou Z.[1], Xong W.[1], Chen W.R.[1], Hines M.L.[2], Shepherd G.M.[1] *[1]Neurobiology, Yale University, New Haven, CT; [2]Computer Science, Yale University, New Haven, CT*

P11 95 SPONTANEOUS ACTIVITY OF MITRAL CELLS IN THE RAT AND MOUSE
Nica R., Mast T.G., Griff E.R. *Biological Sciences, University of Cincinnati, Cincinnati, OH*

P12 96 PRE- AND POST-SYNAPTIC PATTERNS OF BULBAR ACTIVATION FOLLOWING ODOR STIMULATION OF THE ZEBRAFISH OLFACTORY EPITHELIUM
Deng P., Bryner B., Michel W.C. *Physiology, University of Utah, Salt Lake City, UT*

P13 97 LOW-THRESHOLD CALCIUM SPIKES IN TURTLE OLFACTORY BULB GRANULE CELLS
Pinato G., Midtgaard J. *Medical Physiol., Univ. of Copenhagen, Copenhagen, Denmark*

P14 98 SEXUALLY DIMORPHIC AND ISOMORPHIC FEATURES EXHIBITED BY SOME MAIN OLFACTORY BULB GLOMERULI
Schaefer M.L.[1], Oliva A.M.[2], Restrepo D.[2] *[1]Howard Hughes Medical Institute, Department of Molecular Biology and Genetics, Johns Hopkins University School of Medicine, Baltimore, MD; [2]Department of Cellular and Structural Biology and Neuroscience Program, University of Colorado Health Sciences Center, Denver, CO*

P15 99 RHINOTOPY IN THE LARVAL STAGE OF THE SEA LAMPREY, *PETROMYZON MARINUS*
Zielinski B.S., Arbuckle W.J., Firby A.E. *Biological Sciences, University of Windsor, Windsor, Ontario, Canada*

P16 100 ULTRAVIOLET LIGHT MODIFIES SALAMANDER OLFACTORY EPITHELIAL AND OLFACTORY BULB RESPONSES TO ODORANT STIMULI
Cheung M., Kauer J.S. *Neuroscience, Tufts University, Boston, MA*

P17 101 I_H MODULATION OF GRANULE CELL FUNCTION IN THE MOUSE MAIN OLFACTORY BULB
Aungst J.L., Heyward P.M., Hayar A.M., Shipley M.T. *Anatomy and Neurobiology, Program in Neuroscience, University of Maryland at Baltimore, Baltimore, MD*

P18 102 NEURAL BASIS FOR INTERGLOMERULAR CIRCUITS IN THE MAIN OLFACTORY BULB.
Puche A.C.[1], Aungst J.L.[1], Heyward P.M.[1], Erdelyi F.[2], Szabo G.[2], Karnup S.V.[1], Shipley M.T.[1] *[1]Anatomy and Neurobiology, Program in Neuroscience, University of Maryland at Baltimore, Baltimore, MD; [2]Gene Technology and Developmental Neurobiology, Institute of Experimental Medicine, Budapest, Hungary*

P19 103 SELECTIVE ACTIVATION OF CA INFLUX THROUGH NMDA RECEPTORS IN THE MITRAL CELL GLOMERULAR TUFT
Xiong W., Chen W.R. *Neurobiology, Yale University, New Haven, CT*

P20 104 ARE GLUTAMATE SPILLOVER AND NMDA AUTOCEPTORS THE KEY MECHANISM FOR GLOMERULUS-ASSOCIATED NEURONAL SYNCHRONY?
Chen W.R., Xiong W., Zhou Z. *Neurobiology, Yale University, New Haven, CT*

P21 105 PRESYNAPTIC INHIBITION MODULATES THE AMPLITUDE AND TIME COURSE OF THE ODORANT ELICITED INPUT TO THE MOUSE OLFACTORY BULB
Vucinic D., Cohen L.B., Kosmidis E. *Cellular & Molecular Physiology, Yale University, New Haven, CT*

P22 106 IS ENERGY NOT A CONCERN FOR BULBAR ACTIVITY?
Hyder F. *Diagnostic Radiology, Yale University, New Haven, CT*

P23 107 CHARACTERIZATION OF THE SYNAPTIC PROPERTIES OF OLFACTORY BULB PROJECTIONS
McNamara A., Cleland T.A., Linster C. *Cornell University, Ithaca, NY*

P24 108 RATE-ENCODING VERSUS TEMPORAL-ENCODING OF NEURAL ACTIVITY IN HUMAN PRIMARY OLFACTORY CORTEX
Johnson B.N.[1], Mainland J.D.[2], Bensafi M.[2], Khan R.M.[2], Bremner E.[2], Sobel N.[2] *[1]Bioengineering, University of California, Berkeley, CA; [2]Neuroscience, University of California*

P25 109 COORDINATED SYNAPTIC MECHANISMS UNDERLIE CORTICAL OLFACTORY ADAPTATION
Best A.R., Wilson D.A. *Zoology, University of Oklahoma, Norman, OK*

P26 110 MODULATION OF OLFACTORY CORTEX FUNCTION BY CORTICAL ASSOCIATION FIBERS: INTRACELLULAR ANALYSIS *IN VIVO*
Gilmore H.L., Stripling J.S. *Psychology, University of Arkansas, Fayetteville, AR*

P27 111 IMPAIRED LTP IN OLFACTORY CORTEX OF MICE LACKING THE FRAGILE X MENTAL RETARDATION PROTEIN
Larson J. *Psychiatry, University of Illinois at Chicago, Chicago, IL*

P28 112 CEREBELLAR ROLE IN OLFACTION: CONCENTRATION DEPENDANT SNIFF MODULATION
Mainland J.D.[1], Telles C.[1], Amin N.[1], Johnson B.N.[2], Bremner E.A.[1], Bensafi M.[1], Khan R.M.[1], Ivry R.B.[1], Sobel N.[1] *[1]Neuroscience, University of California, Berkeley, CA; [2]Bioengineering, University of California*

Retronasal Olfaction

P29 113 ANALYSIS OF FOOD FLAVORS BY GAS CHROMATOGRAPHY-RETRONASAL OLFACTOMETRY
Honma Y.[1], Komatsu H.[2], Higashi N.[1], Shikata H.[1] *[1]Tobacco Science Research Center, Japan Tobacco Inc., Yokohama, Japan; [2]Leaf Tobacco Research Laboratory, Japan Tobacco Inc., Oyama, Japan*

P30 114 THE EFFECT OF LEARNING MODALITY ON THE RETRONASAL IDENTIFICATION OF ODORS IN ODOR-TASTE MIXTURES
Wilkes F., Laing D.G., Jinks A., Hutchinson I. *Centre For Advanced Food Research, University of Western Sydney, Richmond, Australia*

P31 115 MODELING OLFACTORY PERCEPTION WITH A PERCEPTION-BASED TEMPLATE IMPROVES FMRI DATA PROCESSING
Cerf-Ducastel B., Murphy C. *Psychology, San Diego State University, San Diego, CA*

P32 116 TIME-QUALITY TRACKING OF RETRONASAL AND ORTHONASAL ODORANT PAIRS.
Chaudhry K.[1], Halpern B.P.[2] *[1]Neurobiology & Behavior, Cornell University, Ithaca, NY; [2]Psychology and Neurobiology & Behavior, Cornell University, Ithaca, NY*

P33 117 RETRONASAL OLFACTORY INTENSITY: ASSOCIATIONS WITH TASTE
Duffy V.B.[1], Chapo A.K.[2], Hutchins H.L.[1], Snyder D.[2], Bartoshuk L.M.[2] *[1]Dietetics, University of Connecticut, Storrs, CT; [2]Surgery, Yale University, New Haven, CT*

P34 118 ORTHONASAL VS. RETRONASAL ODORANT ADMINISTRATION DIFFERENTIALLY AFFECTS ATHLETIC PERFORMANCE, MOOD, AND WORKLOAD
Zoladz P., Raudenbush B., Fronchoski R., Price N. *Psychology, Wheeling Jesuit University, Wheeling, WV*

P35 119 ORTHO- AND RETRONASAL PERCEPTION OF ODORS: A STUDY BASED ON EVENT-RELATED POTENTIALS
Hummel T., Heilmann S. *Smell and Taste Clinic, Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany*

P36 120 COMPARISON OF ORTHONASAL AND RETRONASAL PERCEPTION OF NON-FOOD ODORS: A FUNCTIONAL MR IMAGING STUDY
Gerber J.C.[1], Small D.[2], Heilmann S.[3], Hummel T.[3] *[1]Neuroradiology, University of Dresden, Dresden, Germany; [2]Northwestern University Medical School, Chicago, IL; [3]ORL, University of Dresden, Germany*

P37 121 RETRONASAL PRESENTATION OF A FOOD ODOR PREFERENTIALLY ACTIVATES CORTICAL CHEMOSENSORY AREAS COMPARED TO ORTHONASAL PRESENTATION OF THE SAME ODOR AND RETRONASAL PRESENTATION OF A NONFOOD ODOR.
Léger G.C.[1], Hummel T.[2], Conley D.B.[3], Mak E.Y.[4], Simmons K.[4], Small D.[4] *[1]Neurology, Northwestern University, Chicago, Illinois; [2]University of Dresden Medical School, Germany; [3]Otorhinolaryngology, Northwestern University, Chicago, IL; [4]Northwestern Univ., Chicago, IL*

P38 122 RETRONASAL OLFACTION IN NASAL POLYPOSIS
Landis B.N.[1], Giger R.[1], Hugentobler M.[1], Hummel T.[2], Lacroix J.[1] *[1]ORL, Hopitaux Universitaires de Geneve, Geneva, Switzerland; [2]Smell and Taste Clinic, Otorhinolaryngology, University of Dresden, Germany*

Perception of Mixtures & Multimodal Stimuli

P39 123 ODOR SUPPRESSION IN BINARY MIXTURES
Cashion L.[1], Livermore A.[2], Hummel T.[3] *[1]School of Social Sciences and Liberal Studies, Charles Sturt University, Bathurst, NSW, Australia; [2]Philip Morris USA, Richmond, VA; [3]Department of Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany*

P40 124 EFFECTS OF PERCEIVED AND IMAGINED ODORS ON TASTE DETECTION
Djordjevic J., Abrol K., Boyle J., Zatorre R., Jones-Gotman M. *Montreal Neurological Institute, Montreal, Canada*

P41 125 ODOR-INDUCED CHANGES IN TASTE PERCEPTION
Boyle J., Djordjevic J., Abrol K., Perreau E., Lakdawalla Z., Zatorre R., Jones-Gotman M. *Montreal Neurological Institute, Montreal, Canada*

P42 126 COLOR ENHANCES FRUITINESS
Zellner D., Koza B. *Psychology, Montclair State University, Upper Montclair, NJ*

P43 127 ODOR AND TASTE INTERACTION ON OLFACTORY EVOKED POTENTIALS
Kettenmann B., Mueller C., Wille C., Kobal G. *University of Erlangen-Nuremberg, Erlangen, Germany*

P44 128 FLAVOR EXPECTATIONS
White T.L.[1], Prescott J.[2] *[1]Psychology, Le Moyne College, Syracuse, NY; [2]Sensory Science Research Centre, University of Otago, Dunedin, New Zealand*

P45 129 INTEGRATION OF TASTE AND ORALLY PRESENTED ODOR
Delwiche J.F., Heffelfinger A.L. *FST Sensory Science Group, Ohio State University, Columbus, OH*

P46 130 IMAGES OF DESIRE: FMRI AND FOOD CRAVING
Pelchat M.L.[1], Ragland J.D.[2] *[1]Monell Chemical Senses Center, Philadelphia, PA; [2]Psychiatry, Univ. Pennsylvania, Philadelphia, PA*

P47 131 NEURAL CORRELATES OF CHEMOSENSORY INTEGRATION IN HUMANS STUDIED WITH FMRI.
Voss J.L.[1], Mak E.Y.[2], Simmons K.B.[2], Parrish T.B.[2], Small D.[2] *[1]Institute for Neuroscience, Northwestern University, Evanston, Il; [2]Cognitive Neurology and Alzheimer's Disease Center, Northwestern University, Chicago, Il*

P48 132 BITTER-SWEET STIMULUS ANTAGONISM IN THE PERIPHERAL GUSTATORY SYSTEM
Formaker B.K., Hettinger T.P., Frank M.E. *Neurosciences, Dept. Oral Diagnosis, UConn Health Center, Farmington, CT*

P49 133 AMILORIDE BLOCKS NaCl INHIBITION OF CT RESPONSES TO QUININE
Gordon P.E., Frank M.E., Formaker B.K. *Neurosciences, Dept. Oral Diagnosis, UConn Health Center, Farmington, CT*

P50 134 ANALYTIC NATURE OF TASTE MIXTURE INTERACTIONS: CONTRIBUTIONS OF PROP STATUS
Yiee J.H.[1], Duffy V.B.[2], Bartoshuk L.M.[3] *[1]Yale University, New Haven, CT; [2]Dietetics Program, University of Connecticut, Storrs, CT; [3]Surgery, Yale University, New Haven, CT*

P51 135 DISCRIMINABILITY OF TASTES WITHIN FOODS IN PROP TASTER GROUPS
Prescott J., Soo J. *Sensory Science Research Centre, University of Otago, Dunedin, New Zealand*

Aging

P52 136 BIOINFORMATICS ANALYSIS OF GENE EXPRESSION IN THE OLFACTORY-NASAL MUCOSAE OF SENESCENCE-ACCELERATED MICE
Getchell T.[1], Green C.P.[2], Peng X.[3], Stromberg A.[3], Chen K.[4], Mattson M.[5], Getchell M.L.[2] *[1]Physiology, University of Kentucky, Lexington, KY; [2]Anatomy and Neurobiology, University of Kentucky; [3]Statistics, University of Kentucky; [4]Molecular and Biochemical Pharmacology, University of Kentucky; [5]Laboratory of Neurosciences, National Institute on Aging, Baltimore, MD*

P53 137 AGE-RELATED APOTOSIS IN RAT OLFACTORY SENSORY NEURONS
Robinson A.M., Conley D.B., Kern R.C. *Otolaryngology-HNS, Northwestern University, Chicago, IL*

P54 138 AGE-RELATED CHANGES IN OLFACTORY PERFORMANCE : SENSORY, COGNITIVE AND RESPIRATORY FACTORS
Geisler T.[1], Hübener F.[1], Laska M.[2] *[1]Generation Research Program, University of Munich, Bad Tölz, Germany; [2]Department of Medical Psychology, University of Munich, Munich, Germany*

P55 139 APOLIPOPROTEIN E4 POSITIVE INDIVIDUALS EXHIBIT GREATER DECLINE IN ODOR IDENTIFICATION THAN IN ODOR THRESHOLD OR DRS SCORES
Calhoun-Haney R.M., Balie J., Zizak V., Ramage E., Dulay M., Murphy C. *Psychology, San Diego State University, San Diego, CA*

P56 140 OLFACTION ASSESSMENT IN CUBAN-AMERICAN ADULTS USING THE UNIVERSITY OF PENNSYLVANIA SMELL IDENTIFICATION TEST
Lee D.J.[1], Doty R.L.[2], Lam B.L.[3], Gomez-Marin O.[4], Jane D.[5] *[1]Epidemiology and Public Health, University of Miami School of Medicine, Miami, FL; [2]Smell and Taste Center, University of Pennsylvania, Philadelphia, PA; [3]Ophthalmology, University of Miami; [4]Obstetrics & Gynecology, University of Miami School of Medicine; [5]Epidemiology, University of Miami School of Medicine*

P57 141 EFFECT OF ANTICHOLINERGIC MEDICATIONS ON TASTE, SMELL, AND OTHER SENSES AS WELL AS COGNITION IN THE ELDERLY
Schiffman S.S., Kondor A.M., Zervakis J. *Psychiatry, Duke University*

P58 142 TASTE AND ODOR THRESHOLDS IN HEALTHY MIDDLE-AGED AND ELDERLY PARTICIPANTS OVER AN EIGHT YEAR TIME SPAN
Ramage E., Calhoun-Haney R.M., Zizak V., Pirogovsky E., Bailie J., Espineli K., Murphy C. *San Diego State University, San Diego, CA*

P59 143 OLFACTORY AND TRIGEMINAL CHEMOSENSORY INTERACTION IN THE NORMOSMIC ELDERLY
Kurtz D., Newlon J. *Neuroscience and Physiology, State University of New York Upstate Medical University, Syracuse, NY*

P60 144 THE INFLUENCE OF AGING ON TRIGEMINAL CHEMORECEPTION IN THE NORMOSMIC ELDERLY
Newlon J.W., Kurtz D. *Neuroscience and Physiology, State University of New York Upstate Medical University, Syracuse, NY*

P61 145 AGE-RELATED CHANGES IN BITTER AND SWEET SENSATIONS MAY INFLUENCE DIETARY BEHAVIORS
Chapo A.K.[1], Bartoshuk L.M.[1], Duffy V.B.[2] *[1]Surgery, Yale University, New Haven, CT; [2]Dietetics, University of Connecticut, Storrs, CT*

Friday, April 11, 2003

Morning Coffee 7:30-9:00 AM *(Prefunction Area)*

SLIDES

Friday - 8:00-10:00 AM *(Salons C,D,E,F)*

Functional Organization of Gustatory Systems

Chairperson: Suzanne Sollars

8:00 146 STRUCTURE FUNCTION-RELATIONS OF BITTER TASTE RECEPTORS
Bernd B.[1], Hofmann T.[2], Krautwurst D.[1], Meyerhof W.[1] *[1]Molecular Genetics, German Institute of Human Nutrition, Bergholz-Rehbrücke, Germany; [2]Institute of Food Chemistry, University Münster, Münster, Germany*

8:15 147 KNOCKOUT MICE FOR TASTE SIGNAL TRANSDUCTION STUDIES
Rong M.[1], He W.[1], Yasumatsu K.[2], Ninomiya Y.[2], Margolskee R.F.[3], Damak S.[1] *[1]Physiology and Biophysics, Mount Sinai School of Medicine, New York, NY; [2]Section of Oral Neuroscience, Graduate School of Dental Sciences, Kyushu University, Fukuoka, Japan; [3]The Howard Hughes Medical Institute, Mount Sinai School of Medicine, New York, NY*

8:30 148 FUNCTIONAL INTERACTIONS BETWEEN TASTE PAPILLAE: A SINGLE UNIT STUDY IN THE HAMSTER
Vandenbeuch A., Pillias A., Faurion A. *Lab. Neurobiologie Sensorielle, Massy, CEDEX, France*

8:45 149 ORGANIZATION AND PLASTICITY OF GUSTATORY NERVE TERMINAL FIELDS REVEALED BY TRIPLE FLUORESCENT LABELING
May O.L., Hill D.L. *Psychology, University of Virginia, Charlottesville, VA*

9:00 150 DIFFERENTIAL RESPONSE TO FAMILIAR AND UNFAMILIAR TASTE IN THE GUSTATORY CORTEX OF THE FREELY BEHAVING RAT
Bahar A., Dudai Y., Ahissar E. *Department of Neurobiology, Weizmann Institute of Science, Rehovot, Israel*

9:15 151 TASTE INFORMATION IN THE PRIMATE ORBITOFRONTAL CORTEX.
Verhagen J.V., Rolls E.T., Critchley H., Kadohisa M. *Experimental Psychology, University of Oxford, Oxford, UK*

9:30 152 DISSOCIATION OF HUMAN BRAIN REGIONS RESPONDING TO TASTE INTENSITY VS. TASTE AFFECT USING FUNCTIONAL MAGNETIC RESONANCE IMAGING
Gregory M.D., Mak E.Y., Parrish T.B., Small D. *Cognitive Neurology and Alzheimer's Disease Center, Northwestern University, Chicago, IL*

9:45 153 GUSTATORY CODING OF TASTE INTENSITY IN THE HUMAN AMYGDALOID COMPLEX
Small D.[1], Gregory M.[1], Parrish T.B.[2] *[1]Neurology, Northwestern University Medical School, Chicago, IL; [2]Radiology, Northwestern University Medical School, Chicago, IL*

Mid morning coffee available, 9:30-10:00 AM *(Prefunction Area)*

SYMPOSIUM

Friday - 10:15 AM - 12:20 PM *(Salons C, D, E, F)*

Interplay of Olfaction and Emotion Systems

Chairperson: Carol Christensen

10:15 INTRODUCTION TO "INTERPLAY OF OLFACTION & EMOTION SYSTEMS"
Christensen, C. *International Flavors & Fragrances*

10:20 154 THE ANATOMY OF EMOTION IN OLFACTION
Kay L.M. *Institute of Mind & Biology, University of Chicago, IL*

10:40 155 NEUROIMAGING THE DYNAMIC INTERPLAY OF EMOTION AND OLFACTION
Zald D.H. *Dept. Psychology, Vanderbilt University, Nashville, TN*

11:00 156 EMOTIONAL ODORS AND THE FINAL COMMON PATH
Lorig T.S. *Psychology, Washington and Lee University, Lexington, VA*

11:20 157 EMOTIONAL OLFACTORY STIMULI: FROM UNCONSCIOUS TO CONSCIOUS PROCESSING
McClintock M.K. *Psychology, University of Chicago, IL*

11:40 158 LESSONS FROM THE EMOTION LAB
Haviland-Jones J. *Psychology, Rutgers University, Piscataway, NJ*

12:00 159 OLFACTION: A PLAYGROUND FOR SENSATION, EMOTION AND COGNITION
Dalton P. *Monell Chemical Senses Center, Philadelphia, PA*

This symposium was sponsored by International Flavors & Frangrances, Inc.

POSTERS

Friday - 8:00-12:00 PM *(Salon A,B,G,H)*

Animal Behavior: Tracking and Orientation

P1 160 THE CONSEQUENCES OF SPERM CHEMOATTRACTION FOR FERTILIZATION SUCCESS
Zimmer R.K.[1], Riffell J.A.[1], Krug P.J.[1] *[1]Department of Biology, University of California, Los Angeles, CA*

P2 161 PRE- AND POST-ODOR FLICKING BEHAVIOR IN THE CRAYFISH, *ORCONECTES RUSTICUS*, MEASURED AT DIFFERENT FLOW SPEEDS
Kraus-Epley K.E., Moore P.A. *Biological Sciences, Bowling Green State University, Bowling Green, OH*

P3 162 IDENTIFICATION OF CHEMOSENSORY SENSILLA ACTIVATING ANTENNULAR FLICK BEHAVIOR IN THE CARIBBEAN SPINY LOBSTER, *PANULIRUS ARGUS*
Fox M.[1], Mehta S.[2], Daniel P.C.[3] *[1]John F. Kennedy High School, Bellmore, NY; [2]The Wheatley School, Old Westbury, NY; [3]Hofstra University, Hempstead, NY*

P4 163 CRAYFISH RESPONSE TO COMPLEX ODOR SIGNALS
Wolf M., Voigt R., Moore P.A. *Biological Sciences, Bowling Green State University, Bowling Green, OH*

P5 164 DISTINCTION BETWEEN THE ORIENTATION MECHANISMS OF RHEOTAXIS AND CHEMOTAXIS IN THE CRAYFISH THROUGH A BEHAVIORALLY-SELECTIVE LESION
Ramsey S., Kraus-Epley K.E., Moore P.A. *Biological Sciences, Bowling Green State University, Bowling Green, OH*

P6 165 CHEMICALLY MEDIATED SEARCH BEHAVIOR OF GOLDFISH TO FOOD AND PHEROMONAL ODORS
Sherman M.L., Sorensen P.W. *Fisheries, Wildlife, and Conservation Biology, University of Minnesota, Saint Paul, MN*

Olfactory Transduction

P7 166 ELECTROPHYSIOLOGICAL INVESTIGATION AND EFFECT OF FAST RELEASE OF CAGED MOLECULES ON OLFACTORY SENSORY NEURONS ISOLATED FROM MICE
Lagostena L., Menini A. *SISSA, Trieste, Italy*

P8 167 LIVE CELL IMAGING OF CA^{2+} DURING THE CHEMOATTRACTANT OFF-RESPONSE IN *PARAMECIUM*.
Bell W.E.[1], Green M.H.[1], Van Houten J.[2] [1]*Biology, Virginia Military Institute, Lexington, VA;* [2]*Biology, University of Vermont, Burlington, VT*

P9 168 VOLATILE ANESTHETICS MAY INTERACT DIRECTLY WITH OLFACTORY RECEPTORS IN THE RAT
Peterlin Z.[1], Kini A.[1], Ishizawa Y.[2], Zhang X.[1], Eckenhoff R.[2], Firestein S.[1] [1]*Biological Sciences, Columbia University, New York, NY;* [2]*Department of Anesthesia, University of Pennsylvania Medical Center, Philadelphia, PA*

P10 169 THE INTERACTION OF OMP AND BEX REVEALS AN OMP DIMER
Koo J., Margolis F.L. *Anatomy and Neurobiology, University of Maryland at Baltimore, Baltimore, MD*

P11 170 G-PROTEIN LIKE IMMUNOREACTIVITY ON THE CHELAE AND AESTHETASC HAIRS OF THE LATERAL ANTENNULES IN CRAYFISH (*ORCONECTES RUSTICUS*).
Belanger R.M.[1], Moore P.A.[1], Zielinski B.[2] [1]*J.P. Scott Center for Neuroscience, Mind and Behavior, Bowling Green State University, Bowling Green, OH;* [2]*Biological Sciences, University of Windsor, Windsor, Ontario, Canada*

P12 171 MOLECULAR CLONING OF A NEW GABA RECEPTOR SUBUNIT FROM THE LOBSTER OLFACTORY ORGAN
Hollins B., McClintock T.S. *Physiology, University of Kentucky, Lexington, KY*

P13 172 MODELING DIFFUSION OF SECOND MESSENGERS IN OLFACTORY CILIA
Flannery R., French D., Kleene S.J. *University of Cincinnati, OH*

P14 173 EFFECTS OF CYCLIC AMP ON CULTURED OLFACTORY RECEPTOR NEURONS AND ON OLFACTORY SENSILLA OF THE HAWKMOTH *MANDUCA SEXTA*.
Stengl M., Flecke C., Dolzer J. *Animal Physiol., University of Marburg, Marburg, Germany*

P15 174 CYCLIC AMP-INDEPENDENT AND CYCLIC AMP-DEPENDENT OLFACTORY TRANSDUCTION IN *XENOPUS LAEVIS* TADPOLES
Manzini I., Schild D. *Department of Molecular Neurophysiology, University of Goettingen, Germany*

P16 175 ROLES OF CYCLIC NUCLEOTIDE AND INOSITOL 1,4,5-TRIPHOSPHATE PATHWAYS MEDIATING RESPONSIVENESS TO FOOD AND PHEROMONAL ODORS IN GOLDFISH OLFACTORY RECEPTOR NEURONS
Sato K., Sorensen P.W. *Fisheries, Wildlife and Conservation Biology, University of Minnesota, St. Paul, Minnesota*

P17 176 FUNCTIONAL AND STABLE RECONSTITUTION OF AN OLFACTORY RECEPTOR-ACTIVATED CAMP SIGNALLING PATHWAY IN HUMAN HELA CELLS
Chirokova E.[1], Schmiedeberg K.[1], Bedner P.[2], Niessen H.[2], Willecke K.[2], Krautwurst D.[1] [1]*Molecular Genetics, German Institute of Human Nutrition, Bergholz-Rehbrücke, Germany;* [2]*Genetics, University of Bonn, Germany*

P18 177 MODULATION OF THE NATIVE AND RECOMBINANT OLFACTORY CYCLIC NUCLEOTIDE-GATED CHANNEL BY MEMBRANE PHOSPHOINOSITIDES
Zhainazarov A.[1], Spehr M.[2], Wetzel C.[2], Hatt H.[2], Ache B.W.[1] [1]*Whitney Laboratory, Center for Smell and Taste, McKnight Brain Institute, University of Florida, Gainesville, FL;* [2]*Ruhr-Universitaet Bochum, Germany*

P19 178 CATION-DEPENDENT RECTIFICATION IN THE LOBSTER OLFACTORY SODIUM-GATED CATION CHANNEL
Bobkov Y.V., Ache B.W. *The Whitney Laboratory, Center for Smell and Taste, and McKnight Brain Institute, University of Florida, Gainesville, FL*

P20 179 COMPARISON OF I_H-CHANNELS FROM INVERTEBRATE OLFACTORY RECEPTOR NEURONS
Gisselmann G.[1], Bobkov Y.V.[2], Marx T.[1], Wetzel C.[1], Neuhaus E.M.[1], Gamerschlag B.[1], Ache B.W.[2], Hatt H.[1] [1]*Ruhr-Universität Bochum, Bochum, Germany;* [2]*Whitney Laboratory and McKnight Brain Institute, University of Florida, Gainesville, FL*

P21 180 TARGETING VECTORS FOR HCN1 AND HCN4 KNOCK OUT MICE AND INVESTIGATION OF DISTRIBUTION PATTERNS OF HCN ISOFORMS IN RODENT NASAL EPITHELIUM
Pickenhagen A., Gisselmann G., Wetzel C., Hatt H. *Lehrstuhl fuer Zellphysiologie, Ruhr-Universitaet, Bochum, Germany*

P22 181 RECORDINGS OF CA^{2+}-DEPENDENT K^+ CHANNELS ACTIVATED BY ODORS IN `ON CELL´ AND EXCISED TOAD CILIARY PATCHES: COMPLEMENTARY LIPID BILAYER STUDIES
Delgado R.[1], Castillo K.[2], Wolff D.[1], Bacigalupo J.[1] [1]*Millennium Institute for Advanced Studies, CBB, Santiago, Chile;* [2]*Faculty of Sciences, Univ of Chile, Santiago, Chile*

P23 182 MITOCHONDRIAL INFLUENCE ON CALCIUM AND ACTION POTENTIAL FIRING RATE IN OLFACTORY RECEPTOR NEURONS OF *RANA PIPIENS*
Buntinas L.[1], Koutalos Y.[2], Restrepo D.[1] [1]*Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO;* [2]*Physiology and Biophysics, University of Colorado Health Sciences Center, Denver, CO*

P24 183 CHARACTERIZATION OF THE PLASMA MEMBRANE CA^{2+}-ATPases IN MOUSE OLFACTORY AND VNO EPITHELIA
Cusick M.[1], Delay R.[2], Van Houten J.[3] *[1]University of Vermont, Burlington, VT; [2]Biology Department, University of Vermont; [3]Zoology/Cell and Microbiology, University of Vermont*

P25 184 SPATIAL RELATIONS BETWEEN OLFACTORY SENSORY NEURONS REVEALED IN GENE-TARGETED MICE
Grosmaitre X.[1], Ma M.[2], Vassalli A.[3], Mombaerts P.[3], Shepherd G.M.[1] *[1]Neurobiology, Yale University, New Haven, CT; [2]Neuroscience, University of Pennsylvania, Philadelphia; [3]Rockefeller University, NY*

P26 185 OPTICAL IMAGING OF INTRACELLULAR CL- IN MOUSE OLFACTORY NEURONS, DYNAMIC CHANGES WITH ODOR STIMULATION.
Delay R., Verret T.J. *Biology Department, University of Vermont, Burlington, VT*

P27 186 P2Y RECEPTORS IN AN OLFACTORY CELL LINE (ODORA)
Washburn K., Liu G., Turner T., Talamo B.R. *Neuroscience, Tufts University, Boston, MA*

P28 187 GONADOTROPIN-RELEASING HORMONE MODULATES THE VOLTAGE-ACTIVATED SODIUM CURRENT IN *NECTURUS* OLFACTORY NEURONS
Zhang W., Delay R. *Biology Department, University of Vermont, Burlington, VT*

Olfactory Coding in the Periphery

P29 188 EVOLUTION OF THE OLFACTORY CODE IN THE *DROSOPHILA MELANOGASTER* SUBGROUP
Stensmyr M., Hansson B. *Swedish University of Agricultural Sciences, Alnarp, Sweden*

P30 189 NEURAL TRACING OF OLFACTORY SENSORY NEURONS IN LAND SNAIL (*EOBANIA VERMICULATA*)
Mazzatenta A.[1], Pelosi P.[2], Cellerino A.[3] *[1]Biophysic, International School for Advanced Studies, Trieste, Italy; [2]Biotechnology and Ag. Chemistry, Pisa University, Pisa, Italy; [3]Neurophysiology Institute, Scuola Normale Superiore, Pisa, Italy*

P31 190 CHEMO- AND MECHANOSENSORY RESPONSES BY CRAYFISH (*ORCONECTES RUSTICUS*) ANTENNAE
Urban L., Voigt R., Moore P.A. *Biological Sciences, Bowling Green State University, Bowling Green, OH*

P32 191 SENSORY NEURONS IN THE GOLDFISH OLFACTORY EPITHELIUM RESPOND DURING APPLICATION OF A GREAT VARIETY OF STIMULI
Zippel H.P. *Physiology, Georg-August University, Goettingen, Germany*

P33 192 EXCITATORY AND SUPPRESSIVE RESPONSES OF CATFISH OLFACTORY RECEPTOR NEURONS IN HIGHLY PURIFIED WATER
Dolensek J., Miklavc P., Valentincic T. *Biology, University of Ljubljana, Ljubljana, Slovenia*

P34 193 A CROSS-SPECIES COMPARISON OF METABOLIC MARKERS IN OLFACTORY EPITHELIUM
Sitthichai A.A., Lucero M.T., Michel W.C. *Physiology, University of Utah, Salt Lake City, UT*

P35 194 STRUCTURE-FUNCTION CORRELATIONS OF TRANSDUCTION IN OLFACTORY RECEPTOR NEURONS IN CATFISH
Rolen S.H.[1], Hansen A.[2], Anderson K.T.[2], Nikonov A.[1], Finger T.E.[2], Caprio J.T.[1] *[1]Biological Sciences, Louisiana State University, Baton Rouge, LA; [2]Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO*

P36 195 PHEROMONE RESPONSES IN OLFACTORY RECEPTOR NEURONS OF SEA LAMPREYS (*PETROMYZON MARINUS*).
Teeter J.[1], Lischka F.[1], Li W.[2] *[1]Monell Chemical Senses Center, Philadelphia, PA; [2]Michigan State University, East Lansing, MI*

P37 196 PHARMACOLOGICAL PROFILE OF MAMMALIAN RECEPTORS FOR OCTANAL
Araneda R.C., Peterlin Z., Firestein S.*Columbia University, New York, NY*

P38 197 OLFACTORY RECEPTOR ANTAGONISM BETWEEN ODORANTS
Oka Y., Omura M., Kataoka H., Touhara K. *Department of Integrated Biosciences, University of Tokyo, Chiba, Japan*

P39 198 HIGH-: THROUGHPUT IMAGING OF OLFACTORY NEURONAL RESPONSES TO SINGLE COMPOUNDS AND MIXTURES
Adamek G., Bryant B., Rawson N. *Monell Chemical Senses Center, Philadelphia, PA*

P40 199 ELECTROPHYSIOLOGICAL ANALYSIS OF ARRESTIN FUNCTION IN PERIPHERAL OLFACTORY SIGNALING IN INSECTS
Merrill C.E., Zwiebel L.J. *Biological Sciences, Vanderbilt University, Nashville, TN*

P41 200 ARRESTIN FUNCTION IN OLFACTORY BEHAVIORAL OUTPUTS IN *DROSOPHILA*
Sherertz T.M., Merrill C.E., Zwiebel L.J. *Biological Sciences, Vanderbilt University, Nashville, TN*

Neurotransmitters in the Olfactory CNS

P42 201 GRANULE CELL-MEDIATED LATERAL INHIBITION CAN BE DRIVEN BY METABOTROPIC GLUTAMATE RECEPTORS IN THE MAIN OLFACTORY BULB
Heinbockel T., Ennis M. *Anatomy & Neurobiology, University of Maryland School of Medicine, Baltimore, MD*

P43 202 DISTRIBUTION OF GLUTAMATE RECEPTOR SUBUNITS IN THE OLFACTORY BULB OF ZEBRAFISH, *DANIO RERIO*
Deyoung C.L., Byrd C.A. *Biological Sciences, Western Michigan University, Kalamazoo, MI*

P44 203 FUNCTIONAL EXPRESSION OF NMDA RECEPTORS IN THE DEVELOPING OLFACTORY SYSTEM OF ZEBRAFISH.
Sakata Y., Michel W.C. *Physiology, Univ. Utah, Salt Lake City, UT*

P45 204 NMDA R1 SUBUNIT EXPRESSION IN MOUSE OLFACTORY BULB
Josephson E.M., Jennart A.P. *Anatomy, Physiology and Pharmacology, Auburn University, Auburn, AL*

P46 205 A DIVERSITY OF FUNCTIONAL IONOTROPIC GLUTAMATE RECEPTORS ON THE MITRAL CELL SOMATODENDRITIC MEMBRANE
Lowe G. *Monell Chemical Senses Center, Philadelphia, PA*

P47 206 THE EFFICACY OF SYNAPTIC TRANSMISSION IN THE OLFACTORY BULB: RELATION TO AMPA RECEPTOR DIVERSITY AND MODULATION.
Blakemore L.J., Trombley P.Q. *Biological Science, Florida State University, Tallahassee, FL*

P48 207 ACTION POTENTIALS FACILITATE COMMUNICATION BETWEEN PROXIMAL AND DISTAL DENDRITIC COMPARTMENTS IN OLFACTORY BULB GRANULE CELLS
Tia S., Strowbridge B.W. *Dept of Neurosciences, Case Western Reserve University, Cleveland, OH*

P49 208 ANTENNAL LOBE NEURONS USE NITRIC OXIDE FOR PROCESSING OLFACTORY INPUT IN THE MOTH *MANDUCA SEXTA*
Wilson C., Christensen T.A., Nighorn A. *ARL Division of Neurobiology, University of Arizona, Tucson, AZ*

P50 209 MOLECULAR ANALYSIS OF THE CALCIUM-DEPENDENT REGULATION OF CGMP FORMATION IN THE ANTENNAL LOBE OF *MANDUCA SEXTA*
Collmann C., Nighorn A. *Neurobiology, Univ. Arizona, Tucson, AZ*

P51 210 CHARACTERIZATION OF AN IMMORTALIZED PUTATIVE DOPAMINERGIC OLFACTORY BULB CELL LINE.
Saino S.[1], Son J.H.[2], Chun H.S.[2], Baker H.[2] *[1]Dept. Anatomy, Yamagata University, Yamagata, Japan; [2]Burke Med. Res. Inst., Cornell University, White Plains, NY*

P52 211 NEUROINHIBITORY ACTIONS OF TAURINE IN THE MAIN OLFACTORY BULB
Kratskin I.[1], Benedusi M.[2], Belluzzi O.[2] *[1]Smell and Taste Center, University of Pennsylvania, Philadelphia; [2]Biology, University of Ferrara, Ferrara, Italy*

P53 212 PUTATIVE GABAERGIC OLFACTORY JUXTAGLOMERULAR CELLS FROM GAD-GFP TRANSGENIC MICE HAVE PROPERTIES SIMILAR TO PERIGLOMERULAR CELLS.
Shao Z.[1], Hayar A.M.[1], Puche A.C.[1], Erdelyi F.[2], Szabo G.[2], Shipley M.T.[1] *[1]Dept. of Anatomy and Neurobiology, University of Maryland, Baltimore, MD; [2]Dept. of Gene Technology and Developmental Neurobiology, Institute of Experimental Medicine, Budapest, Hungary*

P54 213 TASK-DEPENDENT CHOLINE CONCENTRATION IN PRIMARY OLFACTORY CORTEX OF THE HUMAN
Zelano C.M.[1], Kaiser L.[1], Mainland J.D.[1], Khan R.M.[1], Johnson B.N.[1], Bensafi M.[2], Sobel N.[1] *[1]Biophysics, University of California, Berkeley, CA; [2]Neuroscience, University of California, Berkeley,*

Neural Plasticity & Regeneration

P55 214 RECOVERY OF THE P2 ODORANT RECEPTOR SUBTYPE AFTER NERVE TRANSECTION
Yoshida-Matsuoka J.[1], Tsukatani T.[2], Matsuoka M.[1], Costanzo R.M.[1] *[1]Physiology, Virginia Commonwealth University, Richmond, VA; [2]Otorhinolaryngology, Kanazawa University, Kanazawa, Ishikawa, Japan*

P56 215 A MORPHOLOGICAL AND HISTOCHEMICAL STUDY OF THE RESPONSE TO PERIPHERAL DEAFFERENTATION IN THE ADULT ZEBRAFISH OLFACTORY BULB
Heard B.R., Byrd C.A. *Biological Sciences, Western Michigan University, Kalamazoo, MI*

P57 216 RECOVERY OF GURMARIN- AND AMILORIDE-SENSITIVITIES OF THE MOUSE CHORDA TYMPANI NERVE AFTER THE NERVE CRUSH AND REGENERATION
Yasumatsu K., Kojima H., Yokota Y., Ninomiya Y. *Oral Neuroscience, Kyushu University, Fukuoka, Japan*

P58 217 UNILATERAL CHORDA TYMPANI NERVE SECTION INDUCES A BILATERAL INCREASE IN LINGUAL MACROPHAGES IN CONTROL-FED BUT NOT NA^+-RESTRICTED RATS.
McCluskey L.P. *Physiology, Medical College of Georgia, Augusta, GA*

P59 218 NERVE CUT INDUCED DECREASE OF CHORDA TYMPANI TERMINAL FIELDS IN THE NTS OF ADULT CONTROL AND SODIUM-RESTRICTED RATS.
Cheon B.K.[1], Hill D.L.[2] *[1]Cognitive Psych, University of Virginia, Charlottesville, VA; [2]Psychology, Univ. Virginia, Charlottesville, VA*

Cash Lunch Carts Available, Noon-1:30 PM *(Prefunction Area)*

AChemS Business Meeting, 12:15-2:00 PM *(Salons C, D, E, F)*

Smell vs. Taste Softball Game, 2:00-4:00 PM *(Organizers: John Boughter & Rob Christy): Fruitville Road Park, Field #1*

SYMPOSIUM

Friday - 6:00 PM - 8:00 PM *(Salons C, D, E, F)*

AChemS-25 Anniversary Symposium: Perspectives on the Chemical Senses

Chairpersons: John Scott and Gordon Shepherd

6:00 INTRODUCTION: "PERSPECTIVES ON THE CHEMICAL SENSES"
Scott, J.[1]; Shepherd, G.[2] *[1]Emory University; [2]Yale University*

6:05 219 OLFACTION OVER 25 YEARS: HOW HAVE THINGS CHANGED, WHAT MIGHT THEY TELL US?
Kauer J.S. *Neuroscience, Tufts University, Boston, MA*

6:25 220 25 YEARS OF DEFINING TASTE SPECIFICITY
Frank M.E., Hettinger T.P. *Neurosciences, Dept. Oral Diagnosis, Univ. Conn. Health Center, Farmington, CT*

6:45 221 25 YEARS OF SOCIAL COMMUNICATION: THE RELEVANCE OF BEHAVIORAL STUDIES TO ADVANCES IN THE CHEMICAL SENSES.
Vickers N.J. *Biology, University of Utah, Salt Lake City, UT*

7:05 Panel Discussion

Buses Leave Hyatt for Ringling Museum, 8:00-8:30 PM

AChemS25th Anniversary Reception, Ringling Museum, 8:30-11:00PM

Saturday, April 12, 2003

Morning Coffee, 7:30-9:00 AM *(Prefunction Area)*

SLIDES

Saturday - 8:00-10:00 AM *(Salons C, D, E, F)*

Olfactory Function in Health & Disease *(Chairperson: Pamela Dalton)*

8:00 222 MODELING NASAL AIRFLOW AND ODORANT TRANSPORT: IMPLICATIONS FOR ODOR PERCEPTION
Zhao K.[1], Scherer P.W.[1], Hajiloo S.A., Dalton P.[3] *[1]Bioengineering, University of Pennsylvania, Philadelphia, PA; [3]Monell Chemical Senses Center, Philadelphia, PA*

8:15 223 FMRI STUDY OF HUMAN OLFACTION AND NORMAL AGING AT HIGH FIELD
Wang J.[1], Eslinger P.J.[2], Smith M.B.[1], Yang Q.X.[1] *[1]Radiology, Pennsylvania State University, Hershey, PA; [2]Neurology, Pennsylvania State University, Hershey, PA*

8:30 224 ODOR-INDUCED FMRI BRAIN ACTIVATION IN THE HEALTHY ELDERLY AND AD PATIENTS
Tabert M.[1], Albers M.[2], Zarahn E.[1], Zimora D.[1], Lorig T.[3], Small S.[2], Doty R.[4], Devanand D.[1] *[1]Psychiatry, Columbia University, New York, NY; [2]Neurology, Columbia University, New York, NY; [3]Psychology, Washington and Lee University, Lexington, VA; [4]Smell & Taste Center, University of Pennsylvania, Philadelphia, PA*

8:45 225 PROGNOSIS FOR OLFACTORY DYSFUNCTION: THE GOOD, THE BAD, AND THE UGLY
Pribitkin E.D.[1], Cowart B.J.[2], Rosen D.[1], Klock C.T.[2] *[1]Otolaryngology-Head and Neck Surgery, Thomas Jefferson University, Philadelphia, PA; [2]Monell Chemical Senses Center, Philadelphia, PA*

9:00 226 APOE-E4 IS ASSOCIATED WITH INTRUSION ERRORS IN EPISODIC RECOGNITION MEMORY FOR OLFACTORY BUT NOT VISUAL STIMULI
Gilbert P.E.[1], Dean P.[2], Hajducko E.[2], Murphy C.[2] *[1]Head and Neck Surgery, School of Medicine, University of California, San Diego, CA; [2]Psychology, San Diego State University, CA*

9:15 227 MULTIPLE CHEMICAL SUPERSENSITIVITY - THE MECHANISMS OF ACTION
Savic I.[1], Berglund H.[2], Hillert l.[3] *[1]Neuroscience, Karolinska Institute, Stockholm, Sweden; [2]Medicine, Stockholm, Sweden; [3]Environmental Medicine, Karolinska Institute, Stockholm,*

9:30 228 EFFECTS OF THE APOE E4 ALLELE ON OLFACTORY FUNCTION IN DOWN SYNDROME
Sliger M.[1], Lander T.[2], Murphy C.[1] *[1]Psychology, San Diego State University, San Diego, CA; [2]Surgery, Head and Neck, UCSD Medical Center, San Diego, CA*

9:45 229 DIFFERENTIAL LOSS OF RETRONASAL RELATIVE TO ORTHONASAL OLFACTION IN A CLINICAL POPULATION
Cowart B.J.[1], Halpern B.P.[2], Rosen D.[3], Klock C.T.[1], Pribitkin E.D.[3] *[1]Monell Chemical Senses Center, Philadelphia, PA; [2]Neurobiology and Behavior, Cornell University, Ithaca, NY; [3]Department of Otolaryngology-Head and Neck Surgery, Thomas Jefferson University, Philadelphia, PA*

Mid morning coffee available 9:30-10:00 AM *(Prefunction Area)*

SYMPOSIUM

Saturday - 10:15 AM - 12:20 PM *(Salons C, D, E, F)*

Patterning in Olfactory Systems: How Much is Pre-Specified?

Chairperson: Leslie Tolbert

10:15 230 PATTERNING IN OLFACTORY SYSTEMS: HOW MUCH IS "PRESPECIFIED?"
Tolbert L. *University of Arizona, Tucson, AZ*

10:20 231 INTERDEPENDENCE AND COORDINATION OF AXONS AND ODORANT RECEPTOR GENES
Chess A. *Biology, Massachusetts Institute of Technology, Cambridge, MA*

10:50 232 THE SIMPLE BUT VERTEBRATE-LIKE ADULT OLFACTORY SYSTEM OF *DROSOPHILA* DERIVES FROM A MINIATURE LARVAL SYSTEM WITH NO MORE THAN 21 RECEPTOR NEURONS
Stocker R.F.[1], Python F.[1], Jefferis G.[2], Marin E.[2], Luo L.[2] *[1]Biology, University of Fribourg, Fribourg, Switzerland; [2]Biol. Sciences, Stanford University, Stanford, CA*

11:20 233 PRIMARY OLFACTORY AXONS CAN SORT OUT AND CONVERGE INDEPENDENTLY OF THE OLFACTORY BULB IN MOUSE
St John J.A., Key B. *School of Biomedical Sciences, University of Queensland, Brisbane, QLD, Australia*

11:50 234 AN OLFACTORY BULB-LIKE STRUCTURE DEVELOPS IN THE ABSENCE OF OLFACTORY SENSORY INPUT IN MOUSE
Lopez-Mascaraque L., Rivera R., García C., Valverde F., De Carlos J.A. *Developmental Neurobiology, Instituto Cajal-CSIC, Madrid, Spain*

This symposium was sponsored in part by a grant from the National Institute on Deafness and Other Communication Disorders

POSTERS

Saturday - 8:00 AM-Noon *(Salons A,B,G,H)*

Olfactory Receptor Genes

P1 235 HUMAN SPERM CHEMOTAXIS: FUNCTIONAL ROLE OF A PREVIOUSLY UNDESCRIBED TESTICULAR ODORANT RECEPTOR
Spehr M.[1], Gisselmann G.[1], Poplawski A.[1], Riffell J.A.[2], Wetzel C.H.[1], Zimmer R.K.[2], Hatt H.[1] *[1]Cell Physiology, Ruhr-Universitaet Bochum, Bochum, Germany; [2]Biology, University of California, Los Angeles, CA*

P2 236 AN ODORANT RECEPTOR FROM *ANOPHELES GAMBIAE* THAT IS HIGHLY CONSERVED ACROSS INSECT TAXA
Pitts R.J., Fox A.N., Melo A.C., Zwiebel L.J. *Biological Sciences, Vanderbilt University, Nashville, TN*

P3 237 IDENTIFICATION OF CANDIDATE OLFACTORY RECEPTORS OF THE MOTH *HELIOTHIS VIRESCENS*
Krieger J.[1], Raming K.[2], Dewer Y.M.[1], Bette S.[1], Conzelmann S.[1], Breer H.[1] *[1]Institute of Physiology, University of Hohenheim, Stuttgart, Germany; [2]Target Research Insecicides, Bayer Crop Science, Monheim, Germany*

P4 238 A COMPARATIVE STUDY OF OLFACTORY RECEPTORS IN SEA TURTLES, LAND TURTLES, AND ALLIGATOR
Vieyra M.L., Vogt R.G. *Biological Sciences, University of South Carolina, Columbia, SC*

P5 239 OR37-RECEPTORS: A UNIQUE SUBFAMILY OF OLFACTORY RECEPTORS
Strotmann J., Hoppe R., Conzelmann S., Breer H.[1] *Institute of Physiology, University of Hohenheim, Stuttgart, Germany*

P6 240 UNDERSTANDING THE RELATIONSHIP BETWEEN SEQUENCE VARIATION AND ODORANT RECOGNITION IN OLFACTORY RECEPTORS
Schlador M.L., Walker M., Trask B.J. *Div. of Human Biol., Fred Hutchinson Cancer Research Center, Seattle, WA*

P7 241 EXPRESSION OF RAT ODORANT RECEPTOR mRNA IN NON-OLFACTORY TISSUES
Weiler E. *Neurophysiology, Ruhr-University Bochum, Bochum, Germany*

P8 242 FUNCTIONAL ANALYSIS OF STABLY EXPRESSED MAMMALIAN OLFACTORY RECEPTORS
Bieri S.[1], Valero A.[1], Slack J.[2], Schilling B.[1] *[1]Givaudan Schweiz AG, Duebendorf, Zurich, Switzerland; [2]Givaudan Flavors Corp., Cincinnati, OH*

P9 243 THE ORPHAN RECEPTOR GUANYLYL CYCLASE EXPRESSED IN OLFACTORY SENSORY NEURONS OF RODENTS IS A PSEUDOGENE IN HUMAN: ASSIGNMENT TO CHROMOSOME BAND 11Q14
Nagatani G.[1], Wu K.[2], Fülle H.J.[2] *[1]PIBBS, University of Southern California, Los Angeles, CA; [2]Dept of Cell & Neurobiology, University of Southern California Keck School of Medicine, Los Angeles, CA*

P10 244 LOCALIZATION OF OLFACTORY RECEPTOR mRNA IN HUMAN OLFACTORY RECEPTOR NEURONS
Rawson N.[1], Yee K.[1], Hahn C.[2] *[1]Monell Chemical Senses Center, Philadelphia, PA; [2]Dept. Psychiatry, University of Pennsylvania, Philadelphia, PA*

Olfactory CNS Coding

P11 245 SPACE, TIME, AND ODOR CODING I: ODOR IDENTITY WITHIN THE CONTEXT OF CONTEXT IN *MANDUCA SEXTA*
Cheich M.[1], Daly K.C.[1], Smith B.H.[1] *[1]Entomology, Ohio State University, Columbus, OH*

P12 246 SPACE, TIME AND ODOR CODING II: HIGH DIMENSIONAL EUCLIDIAN DISTANCE AS A MEASURE OF ODOR DISCRIMINABILITY AND TIME TO DISCRIMINATION ACROSS POPULATIONS OF ANTENNAL LOBE UNITS IN *MANDUCA SEXTA*
Daly K.C., Smith B.H. *Entomology, Ohio State Univ., Columbus, OH*

P13 247 ODOR RESPONSES OF PROJECTION NEURONS INNERVATING MORPHOLOGICALLY IDENTIFIED GLOMERULI IN THE ANTENNAL LOBE OF THE MOTH *MANDUCA SEXTA*
Reisenman C., Christensen T.A., Hildebrand J.G. *ARL Neurobiology, University of Arizona, Tucson, AZ*

P14 248 PHYSIOLOGICAL AND MORPHOLOGICAL CHARACTERISTICS OF CO_2-SENSITIVE NEURONS IN THE ANTENNAL LOBE OF THE MOTH *MANDUCA SEXTA*
Guerenstein P.G., Hildebrand J.G. *ARL, Univ. Arizona, Tucson, AZ*

P15 249 GENETIC CONTROL OF OLFACTORY CHARACTERISTICS IN MALE MOTHS
Vickers N.J. *Biology, University of Utah, Salt Lake City, UT*

P16 250 WHOLE-CELL PATCH-CLAMP RECORDINGS FROM KENYON CELLS IN AN IN VIVO PREPARATION OF THE MOTH BRAIN
Sjöholm M., Hansson B. *Swedish University of Agricultural Sciences, Alnarp, Sweden*

P17 251 ENSEMBLE CODES FOR CONTEXTUAL FEATURES OF OLFACTORY STIMULI RECORDED WITH MULTI-ELECTRODE ARRAYS IN THE MOTH ANTENNAL LOBE
Dacks A., Christensen T.A., Pawlowski V.M., Hildebrand J.G. *ARL Division of Neurobiology, University of Arizona, Tucson, AZ*

P18 252 MALE AND FEMALE FERRET ANAL SCENT GLAND SECRETIONS ACTIVATE DIFFERENT CLUSTERS OF GLOMERULI IN THE MAIN OLFACTORY BULB.
Woodley S.K., Sapute S., Lieberman Z., Coulter-Thurley R., Baum M. *Biology, Boston University, Boston, MA*

P19 253 CHANGES IN ODOR-EVOKED C-FOS EXPRESSION PATTERNS ELICITED BY OPERANT CONDITIONING IN MOUSE OLFACTORY BULB
Zhang C., Arellano J., Restrepo D. *Department of Cellular and Structural Biology, Neuroscience Program and the Rocky Mountain Smell and Taste Center, University of Colorado Health Sciences Center, Denver, CO*

P20 254 A FOVEA IN THE NOSE: EVIDENCE FOR DISPROPORTIONATE MAPPING OF THE OLFACTORY NOSE ONTO THE MAIN OLFACTORY BULB OF THE HAMSTER
Schoenfeld T.A., Knott T.K. *Physiology, University of Massachusetts Medical Schoo, Worcester, MA*

P21 255 EXPERIENCE-INDUCED OLFACTORY BULB MITRAL/TUFTED CELL RECEPTIVE FIELD PLASTICITY
Fletcher M.L., Wilson D.A. *Zoology, Univ. Oklahoma, Norman, OK*

P22 256 REPRODUCIBILITY (OR LACK THEREOF) IN GLOMERULAR ACTIVATIONS
Kida I., Xu F., Hyder F. *Diagnostic Radiology, Yale University, New Haven, CT*

Gustatory Transduction

P23 257 SPATIAL PATTERNS OF ODOR-EVOKED ACTIVITY IN PIRIFORM CORTEX CHANGE DURING DEVELOPMENT
Illig K.R. *Psychology, University of Virginia, Charlottesville, VA*

P24 258 CALCIUM PUMP ISOFORMS IN CHEMOSENSORY TRANSDUCTION
Gannon-Murakami L.[1], Yano J.[1], Valentine M.[1], Preston R.R.[2], Zhukovskya M.[2], Van Houten J.L.[1] *[1]Biology, University of Vermont, Burlington, VT; [2]Pharmacology, Drexel University, Philadelphia, PA*

P25 259 GPI ANCHORED PROTEINS AND LIPID RAFTS IN CHEMOSENSORY SIGNAL TRANSDUCTION
Yano J.[1], Valentine M.[1], Chandran S.[1], Weeraratrane S.[1], Kasper S.[1], Pan Y.[1], Preston R.R.[2], Van Houten J.[1] *[1]Biology, University of Vermont, Burlington; [2]Pharmacology&Physiology, Drexel University, Philadelphia*

P26 260 GUSTATORY GENE EXPRESSION PROFILING
Nosrat I.[1], Farjo R.[2], Othman M.[2], Swaroop A.[2], Nosrat C.A.[1] *[1]Oral Neurobiology, Biologic & Materials Sciences, University of Michigan, Ann Arbor, MI; [2]Department of Ophtalmology, University of Michigan*

P27 261 EXPRESSION PROFILING OF TASTE RECEPTOR CELLS.
Lopez-Jimenez N.D., Sainz E., Blackwood C.A., Cavenagh M.M., Battey J.F., Sullivan S.L. *National Institute on Deafness and Other Communication Disorders, National Institutes of Health, Rockville, MD*

P28 262 EFFECT OF Ni^{2+} ON VOLTAGE-DEPENDENT Na^{+} CURRENT IN MORPHOLOGICALLY IDENTIFIED CELLS OF THE BULLFROG TASTE ORGAN
Suwabe T.[1], Narita K.[2], Okuda-Akabane K.[2], Kubota M.[1], Kitada Y.[2] *[1]Operative Dentistry and Endodontics, School of Dentistry, Iwate Medical University, Morioka, Japan; [2]Oral Physiology, School of Dentistry, Iwate Medical University, Morioka, Japan*

P29 263 RAT TASTE BUDS EXPRESS MULTIPLE MEMBERS OF THE KCNK FAMILY OF TWO-PORE DOMAIN POTASSIUM CHANNELS.
Burks C.A.[1], Hansen D.R.[1], Rao S.[1], Lin W.[2], Kinnamon S.C.[3], Gilbertson T.A.[1] *[1]Biology, Utah State University, Logan, UT; [2]Cellular & Structural Biology, University of Colorado Health Sciences Center, Denver, CO; [3]Anatomy & Neurobiology, Colorado State University, Fort Collins, CO*

P30 264 FUNCTIONAL IMPLICATIONS OF DIFFERENCES IN POTASSIUM CHANNEL EXPRESSION AMONG LINGUAL TASTE BUDS.
Hansen D.R., Hoyal D.O., Foley C.E., Guenter J., Johnson D.J., Gilbertson T.A. *Biology, Utah State University, Logan, UT*

P31 265 MOUSE TASTE CELL ACTIVITIES IN RESPONSE TO TASTE STIMULI
Yoshida R.[1], Ishizuka S.[2], Lindemann B.[3], Ninomiya Y.[1] *[1]Oral Neurosicence, Kyushu University, Fukuoka, Japan; [2]Brain Science and Engineering, Kyushu Institute of Technology, Kitakyushu, Japan; [3]Physiology, Saar University, Homberg, Germany*

P32 266 G PROTEINS AND ADENYLYL CYCLASES CO-EXPRESSED IN TASTE RECEPTOR CELLS
Abaffy T., Trubey K., Chaudhari N. *Physiology and Biophysics, University of Miami, Miami, FL*

P33 267 COMPARISON OF THE RESPONSES TO DIFFERENT SWEET AND BITTER STIMULI IN -GUSTDUCIN KNOCKOUT AND WILD TYPE MICE
Danilova V.[1], Damak S.[2], Glendinning J.[3], Margolskee R.F.[2], Hellekant G.[1] *[1]University of Wisconsin, Madison, WI; [2]Mount Sinai School of Medicine, New York, NY; [3]Barnard College, Columbia University, New York, NY*

P34 268 CAP AND COFILIN-1 CO-EXIST IN TASTE CELLS EXPRESSING TASTE RECEPTORS
Ishimaru Y.[1], Emori Y.[2], Abe K.[1] *[1]Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, University of Tokyo, Japan; [2]Biophysics and Biochemistry, Faculty of Science, University of Tokyo, Japan*

P35 269 A SINGLE CELL VIEW OF TASTE SENSATION
Huang L.[1], Vo L.[1], Max M.[2], Margolskee R.F.[2] *[1]Monell Chemical Senses Center, Philadelphia, PA; [2]Howard Hughes Medical Institute, Mount Sinai School of Medicine, New York, NY*

Development of Olfactory Systems

P36 270 ELECTROPHYSIOLOGICAL PROPERTIES OF EMBRYONIC OLFACTORY NEURONS IN EXPLANT CULTURES.
Lischka F.[1], Lamantia A.[2], Rawson N.[1] *[1]Monell Chemical Senses Center, Philadelphia, PA; [2]University of North Carolina, Chapel Hill, NC*

P37 271 UNILATERAL NARIS CLOSURE AND CELL DEATH IN THE NASAL SEPTUM OF THE DEVELOPING RAT
Brunjes P.C., Shurling D. *Psychology, University of Virginia, Charlottesville, VA*

P38 272 HORIZONTAL BASAL CELLS CONTAIN POTENTIAL STEM CELLS FOR THE OLFACTORY EPITHELIUM
Roskams J., MacDonald J., Murdoch B., Carter L. *Zoology, University of British Columbia, Vancouver, British Columbia, Canada*

P39 273 DYNAMIC EXPRESSION OF DEVELOPMENTAL GENES IN THE ADULT ANTENNA OF *MANDUCA SEXTA*
Bohbot J.D., Vogt R.G. *Biological Sciences, University of South Carolina, Columbia, SC*

P40 274 THYROID HORMONE-REGULATED NOSE GENES DURING *XENOPUS LAEVIS* DEVELOPMENT
Walworth E.[1], Burd G.D.[1] *[1]Molecular and Cellular Biology, University of Arizona, Tucson, AZ*

Wednesday April 9, 2003

10:00am-12:00pm
Educational Outreach
GWIZ science center

12:00-3:30
Executive Committee
Executive Board Room

5:00-7:30
Registration
Prefunction Area

6:30-8:00
Opening Buffet
Salons A, B

Welcome & Awards

Givaudan Lecture
Bert Hoelldobler
Multicomponent Signals in Ant Societies
Salons C, D, E, F

Social Gathering, & Cash Bar
Prefunction Area

Organization meeting for students with travel awards
Salon G

Thursday April 10, 2003

Morning Coffee 7:30-9:00

8:00-9:45
Slide Session
Animal Behavior & Olfaction
Salons C, D, E, F

10:00-12:15
Symposium
In Sync: Temporal Coding and Encoding Time in the Olfactory System
Salons C, D, E, F

8:00-12:00
Poster session
- Olfactory Neuro-genesis & Cell Death
- Development of Gustatory Systems
- Gustatory Processing
- Sweet Taste
- Bitter Taste
- Trigeminal Chemo-reception & Irritation
- Sensory Evaluation & Consumer Research

Salons A, B, G, H

12:30-2:00
Minority and Clinical Travel Awardee Luncheon
Executive Board Room

3:30-5:00 NIH Workshop
Funding Opportunities for New Investigators
Salon C, D, E, F

7:00-8:15
Slide Session
Human Psychophysics Taste & Trigeminal
Salons C, D, E, & F

8:30-10:30
Symposium
Hanging by a Thread: Scaffolds in Signal Transduction
Salons C, D, E, F

7:00-11:00
Poster session
- Chemical Ecology
- Olfactory CNS Processing
- Retronasal Olfaction
- Perception of Mixtures & Multimodal Stimuli
- Aging

Salons A, B, G, H

Friday April 11, 2003

Morning Coffee 7:30-9:00

8:00-10:00
Slide Session
Functional Organization of Gustatory Systems
Salons C, D, E, F

10:15-12:15
Symposium
Interplay of Olfaction & Emotion Systems
Salons C, D, E, F

8:00-12:00
Poster session
- Animal Behavior: Tracking & Orientation
- Olfactory Transduction
- Olfactory Coding in the Periphery
- Neurotransmitters in Olfactory CNS
- Neural Plasticity & Regeneration

Salons A, B, G, H

12:15-2:00
Business Meeting
Salons C, D, E, F

2:00-4:00
Softball Game
Fruitville and Lockwood Ridge Road

6:00-8:00
AChemS 25th Anniversary Symposium: "Perspectives on the Chemical Senses"
Salons C, D, E, F

8:00-8:30
Buses leave hotel for Ringling Museum

8:30-11:00
AChemS 25th Anniversary Reception
at the Ringling Museum

Saturday April 12, 2003

Morning Coffee 7:30-9:00

8:00-10:00
Slide Session
Olfactory Function in Health & Disease
Salons C, D, E, F

10:15-12:20
Symposium
Patterning in Olfactory Systems: How Much is Pre-Specified?
Salons C, D, E, F

8:00-12:00
Poster session
- Olfactory Receptor Genes
- Olfactory CNS Coding
- Gustatory Transduction
- Development of Olfactory Systems
- Salt & Sour Taste
- Umami Taste

Salons A, B, G, H

12:15-2:00
Clinical Luncheon
The Keys

2:00-4:00
Workshop on Olfactometry
Salons C, D, E, F

7:00-8:00
Slide Session
Molecular Basis of Sweet Taste
Salons C,D,E,F

8:15-10:30
Presidential Symposium: Biology & Chemistry of Floral Scent
Salons C,D,E,F

7:00-11:00
Poster session
- Olfaction in Animal Behavior
- Animal Behavior: Taste & Feeding
- Oscillations & Synchronization in Olfaction
- Olfactometry & Gustometry
- Vomeronasal Chemoreception
- Human Olfaction: Psychophysics

Salons A, B, G, H

Sunday April 13, 2003

Morning Coffee 7:30-9:00

8:00-9:15
Slide Session
Development of Chemoreceptor Cells
Salons C,D,E,F

9:30-11:45
Slide Session
Functional Organization of Olfactory Systems
Salons C,D,E,F

8:00-12:00
Poster session
- Olfactory Rec Cells
- Histological Profiles in Peripheral Gustatory Systems
- Pheromones & Social Behavior
- Human Olfaction: Pheromones
- Olfaction & Cognition
- Clinical Issues

Salons A, B, G, H

NOTES

Morning Slide Sessions
and
Morning Symposia
8:00am – 12:15 noon
Salons C, D, E, F

Morning Poster Sessions & Exhibits
8:00 am – 12:00 noon
Salons A, B, H, G

Evening Slide Sessions
and
Evening Symposia
7:00 – 10:30pm
Salons C, D, E, F

Evening Poster Sessions & Exhibits
7:00 -11:00 pm
Salons A, B, G, H

Morning Coffee
7:30-9:00 Prefunction Area

Mid-Morning Coffee
9:30-10:00 am
Prefunction Area

Evening Break
8:00-8:30 pm
Prefunction Area

Cash Lunch Cart
after morning sessions
Prefunction Area

P41 275 GLIA IN THE AXON SORTING ZONE OF THE MOTH PRIMARY OLFACTORY PATHWAY ALTER AXON RESPONSES TO SUBSEQUENT GLIAL ENCOUNTERS.
Oland L.A., Howard C.T., Tolbert L.P. *Arizona Research Laboratories Division of Neurobiology, University of Arizona, Tucson, AZ*

P42 276 INTEGRINS IN THE DEVELOPING OLFACTORY SYSTEM
Whitley M.K.[1], Treloar H.B.[1], De Arcangelis A.[2], Georges Labouesse E.[2], Greer C.A.[1] *[1]Neurosurgery, Yale University, New Haven, CT; [2]Institut de Genetique et de Biologie Moleculaire et Cellulaire, CNRS/INSERM/ULP, Strasbourg, France*

P43 277 ASYCHRONOUS DEVELOPMENT OF OLFACTORY SENSORY PROJECTIONS
Zou D.[1], Feinstein P.[2], Greer C.A.[3], Mombaerts P.[4], Firestein S.[1] *[1]Biological Sciences, Columbia University, New York, NY; [2]Mombaerts Lab, Rockefeller University, New York, NY; [3]Neurosurgery, Yale University, New Haven, CT; [4]Laboratory of Vertebrate Developmental Neurogenetics, Rockefeller University, New York, NY*

P44 278 TENASCIN-C IS AN INHIBITORY GUIDANCE MOLECULE IN THE DEVELOPING MOUSE OLFACTORY BULB.
Treloar H.B., Yang Y., Greer C.A. *Neurosurgery, Yale University, New Haven, CT*

P45 279 CADHERINS AND CATENINS: EXPRESSION IN MOUSE OLFACTORY PATHWAY DEVELOPMENT
Akins M.R.[1], Greer C.A.[2] *[1]Interdepartmental Neuroscience Program, Yale University, New Haven, CT; [2]Neurosurgery, Yale University, New Haven, CT*

P46 280 MICROARRAY ANALYSIS OF BONE MORPHOGENETIC PROTEINS, RECEPTORS AND MODULATORS IN THE DEVELOPING MOUSE OLFACTORY BULB
Ukhanova M., Margolis J., Margolis F.L. *Anatomy & Neurobiology, University of Maryland, Baltimore, MD*

P47 281 NEURITE STABILITY IN THE MOUSE OLFACTORY SYSTEM: THE ROLE OF NOGO, P75, & RHOA.
Iwema C.L.[1], Strittmatter S.M.[2], Greer C.A.[1] *[1]Neurosurgery, Yale University, New Haven, CT; [2]Neurobiology, Yale Univ., New Haven, CT*

Salt & Sour Taste

P48 282 CHARACTERIZATION OF AMILORIDE-INSENSITIVE SODIUM SALT RESPONSES USING PATCH CLAMP RECORDING.
Klein J.T., Burks C.A., Gilbertson T.A. *Biology, Utah State University, Logan, UT*

P49 283 IDENTIFICATION OF NATRIFERIC HORMONE RESPONSIVE ELEMENTS IN TASTE CELLS: IMPLICATIONS FOR THE REGULATION OF SALT AND WATER TASTE.
Gilbertson T.A., Chen W., Rao S., Hansen D.R. *Biology, Utah State University, Logan, UT*

P50 284 HAMSTER CHORDA TYMPANI RESPONSES TO POTASSIUM ARE VOLTAGE-SENSITIVE
Edgar B., Proko E., Stewart J., Stewart R. *Psychology/Program in Neuroscience, Washington and Lee University, Lexington, VA*

P51 285 VOLTAGE-SENSITIVITY OF HAMSTER CHORDA TYMPANI SODIUM RESPONSES
Proko E., Greene R., Russell O., Hatzis C., Spatzer R., Stewart R. *Psychology/Program in Neuroscience, Washington and Lee University, Lexington, VA*

P52 286 ALTERATION OF THE TASTES OF SALTS BY CATHODAL CURRENT
Do D., Su H., Frank M.E., Hettinger T.P.[1] *[1]Neurosciences, Dept. Oral Diagnosis, UConn Health Center, Farmington, CT*

P53 287 EXPRESSION OF ACID SENSING ION CHANNELS IN ISOLATED HUMAN TASTE RECEPTOR CELLS
Huque T.[1], Lischka F.[1], Spielman A.I.[2], Bayley D.L.[1], Cao J.[1], Feldman R.S.[3], Brand J.G.[1] *[1]Neuroscience, Monell Chemical Senses Center, Philadelphia, PA; [2]College of Dentistry, New York University, New York, NY; [3]Dental Medicine, V.A. Medical Center, Philadelphia, PA*

P54 288 ACID-INDUCED CALCIUM RESPONSES IN MURINE TASTE CELLS
Richter T.A.[1], Pereira E.[1], Roper S.D.[2] *[1]Physiology & Biophysics, University of Miami School of Medicine; [2]Physiology & Biophysics and Program in Neuroscience, University of Miami School of Medicine*

P55 289 RELATIONSHIP BETWEEN INTRACELLULAR PH AND Ca^{2+} IN FUNGIFORM RAT TASTE RECEPTOR CELLS
Lyall V., Malik S.A., Alam R.I., Heck G.L., Desimone J.A. *Physiology, Virginia Commonwealth University, Richmond, VA*

P56 290 LINGUAL SURFACE POTENTIAL IN HUMANS
Feldman G.M.[1], Heck G.L.[2], Santos C.[3], Clary R.[3], Lyall V.[2], Desimone J.A.[2], Mogyorosi A.[1] *[1]Medicine, Virginia Commonwealth University, Richmond, VA; [2]Physiology, Virginia Commonwealth University, Richmond, VA; [3]Virginia Commonwealth University, Richmond, VA*

Umami Taste

P57 291 IMMUNODETECTING A CANDIDATE UMAMI RECEPTOR, TASTE-mGLUR4, IN TASTE CELLS
Chaudhari N.[1], Pereira E.[2], Landin A.M.[2], Roper S.D.[1] *[1]Physiology & Biophysics and Program in Neuroscience, University of Miami, FL; [2]Physiology & Biophysics, University of Miami*

P58 292 RESPONSES TO GMP AND GLUTAMATE IN TASTE RECEPTOR CELLS OF RAT FUNGIFORM PAPILLAE
Ogura T.[1], Lin W.[2], Kinnamon S.C.[1] *[1]Biomedical Sciences, Colorado State University, Fort Collins, CO; [2]Cell & Structural Biology, University of Colorado Health Sciences Center, Denver, CO*

P59 293 CAN RATS DISCRIMINATE BETWEEN THE TASTES OF IMP, GMP AND MONOSODIUM GLUTAMATE?
Faes T.M., Wifall T.C., Mitzelfeld J.D., Padillo A.M., Delay E.R. *Neuroscience Program, Regis University, Denver, CO*

P60 294 DISCRIMINATION BETWEEN THE TASTES OF SWEET STIMULI AND MONOSODIUM GLUTAMATE IN RATS
Heyer B.R.[1], Taylor-Burds C.C.[1], Mitzelfelt J.D.[1], Delay E.R.[1] *[1]Neuroscience Program, Regis University, Denver, Colorado*

P61 295 GUSTATORY EVOKED MAGNETIC FIELDS AND PERCEPTUAL CHARACTERS OF THE UMAMI SUBSTANCE, IMP
Saito S., Kobayakawa T., Gotow N. *Neuroscience Research Institute, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan*

Cash Lunch Carts Available, Noon-1:30 PM *(Prefunction Area)*

Clinical Luncheon, 12:15-2:00 PM *(The Keys)*

Workshop on Olfactometry
2:00 PM-4:00 PM *(Salons C, D, E, F)*
Organizer: Enrique Cometto- Muñiz, University of California, San Diego
Panelists: David Laing, University of West Sydney, Australia
Thomas Hummel, University of Dresden Medical School, Germany
Thomas Christensen, University of Arizona
Roland Schmidt, University of California, San Diego
Enrique Cometto-Muñiz, University of California, San Diego

SLIDES

Saturday - 7:00-8:15 PM *(Salons C, D, E, F)*

Molecular Basis of Sweet Taste

Chairperson: Valerie Duffy

7:00 296 COMPARATIVE ANALYSIS OF THE T1R TASTE RECEPTOR GENES IN PRIMATES
Li X., Li W., Mascioli K.J., Bachmanov A.A., Tordoff M.G., Epple G., Beauchamp G.K., Reed D.R.[1] *Monell Chemical Senses Center, Philadelphia, PA*

7:15 297 T1R RECEPTORS ARE EXPRESSED BY TYPE II TASTE CELLS IN THE MOUSE
Finger T.E., Anderson K.T., Bartel D., Yee C.L. *Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO*

7:30 298 RELATIVE SENSITIVITY TO SUCROSE, GLUCOSE AND GLYCINE IN SELECTIVE INBRED MOUSE STRAINS.
Eylam S., Spector A.C. *Dept. of Psychology and Ctr. for Smell and Taste, University of Florida, Gainesville, FL*

7:45 299 POLYMORPHISMS OF THE MURINE TAS1R3 GENE ASSORT WITH STRAIN DIFFERENCES IN OROSENSORY RESPONSIVENESS TO LOW BUT NOT HIGH CONCENTRATIONS OF SUCROSE
Glendinning J., Joon Young M., Lin I. *Biological Science, Barnard College, Columbia University, New York, NY*

8:00 300 SWEETENER PREFERENCES OF 129.B6-SAC CONGENIC MICE
Theodorides M.L., Li X., Botchkarev V.V., Beauchamp G.K., Bachmanov A.A. *Monell Chemical Senses Center, Philadelphia, PA*

Evening break, 8:00-8:30 PM *(Prefunction Area)*

SYMPOSIUM

Saturday - 8:30-10:45 PM *(Salons C,D,E,F)*

Presidential Symposium: Biology & Chemistry of Floral Scent

Chairperson: John Hildebrand

8:30 301 INTRODUCTION: THE BIOLOGY AND CHEMISTRY OF FLORAL SCENT
Hildebrand J.G. *ARL Division Of Neurobiology, University of Arizona, Tucson, AZ*

8:35 302 FLORAL SCENT COMPOSITION: STRATEGIES FOR COMPONENT IDENTIFICATION
Bicchi C. *Dipartimento di Scienza e Tecnologia del Farmaco, Università di Torino, Torino, Italy*

9:05 303 DISTINGUISHING SIGNAL FROM NOISE IN COMPLEX FLORAL FRAGRANCES: A BIOLOGICAL PERSPECTIVE
Raguso R.A. *Biological Sciences, University of South Carolina, Columbia, SC*

9:35 304 CODING FLORAL ODORS IN THE INSECT BRAIN
Galizia G.[1], Mustaparta H.[2], Sachse S.[1] *[1]Neurobiologie, Freie Universität Berlin, Berlin, Germany; [2]NTNU, Trondheim, Norway*

10:05 305 HUMAN RESPONSES TO FLORAL ODORS
Van Der Pers-King B. *Sensory Sciences, Quest International Nederland BV, Naarden, Netherlands*

This symposium was sponsored in part by a grant from the National Institute on Deafness and Other Communication Disorders

POSTERS

Saturday - 7:00-11:00 PM *(Salon A,B,G,H)*

Olfaction in Animal Behavior

P1 306 CONCANAVALIN A INHIBITS DETECTION OF D-CARVONE WHILE WGA REDUCES DETECTION OF L-CARVONE
Deutsch S., Apfelbach R. *Zoology, University of Tuebingen, Germany*

P2 307 REVERSIBLE REDUCTION OF ODOR DETECTION AFTER TROMETAMOL APPLICATION TO THE OLFACTORY EPITHELIUM OF RATS
Weiler E.[1], Heisig C.[2], Apfelbach R.[2] *[1]Neurophysiology, Ruhr-Universitaet, Bochum, Germany; [2]Zoology, University of Tuebingen, Tuebingen, Germany*

P3 308 FETAL ODORS REMAIN IN THE MOTHER'S CIRCULATION AFTER HER PUPS ARE BORN
Yamazaki K., Curran M., Beauchamp G.K. *Monell Chemical Senses Center, Philadelphia, PA*

P4 309 DISCRIMINATION OF AMINO ACID MULTIMIXTURES IN CATFISH
Valentincic T., Kralj S., Zgonik V. *Biology, University of Ljubljana, Ljubljana, Slovenia*

P5 310 CANINE OLFACTORY THRESHOLDS TO N-AMYL ACETATE MEASURED NATURALISTICALLY
Walker D.B.[1], Cavnar P.J.[1], Taylor J.L.[1], Pickel D.H.[2], Suarez J.C.[1], Hall S.B.[1], Walker J.C.[1] *[1]Sensory Research Institute, Florida State University, Tallahassee, FL; [2]Von Pickel K-9, Inc., Tallahassee, FL*

P6 311 ADENOVIRAL VECTOR-MEDIATED RESCUE OF THE OMP-NULL BEHAVIORAL PHENOTYPE: ENHANCEMENT OF ODORANT SENSITIVITY
Youngentob S.L.[1], Pyrski M.[2], Margolis F.L.[3] *[1]Neuroscience and Physiology, SUN Y-Upstate Medical University, Syracuse, NY; [2]Anatomy & Neurobiology, University of Maryland at Baltimore, MD; [3]Medicine, University of Maryland at Baltimore*

P7 312 A NEW APPROACH TO COMMUNICATION IN BIRDS: STRUCTURE AND FUNCTION OF NASAL ANATOMY
Yeh J., Launer K., Hagelin J.C. *Ecology and Evolutionary Biology, University of Connecticut, Storrs, CT*

P8 313 TIMING OF *MANDUCA SEXTA* BEHAVIORAL AND PHYSIOLOGICAL TRAITS DURING WANDERING.
Kobres R.P., Fernandez K., Vogt R.G. *Biology, University of South Carolina, Columbia, SC*

Animal Behavior: Taste & Feeding

P9 314 MURINE TASTE PREFERENCE TESTS: WHY ONLY TWO BOTTLES?
Tordoff M.G., Bachmanov A.A. *Monell Chemical Senses Center, Philadelphia, PA*

P10 315 PROP AND PTC TASTE SENSITIVITY ARE DISTINCT PHENOTYPES IN MICE
Nelson T.M.[1], Munger S.D.[1], Boughter J.D.[2] *[1]Anatomy and Neurobiology, University of Maryland School of Medicine, Baltimore, MD; [2]Anatomy and Neurobiology, University of Tennessee Health Science Center, Memphis, TN*

P11 316 CETYLPYRIDINIUM CHLORIDE'S AVERSIVE TASTE TO RATS
Hallagan L.[1], Saperstein S.[1], St. John S.J.[1] *[1]Psychology, Reed College, Portland, OR*

P12 317 DETERMINATION OF NaCl TASTE THRESHOLDS FOR DEVELOPMENTALLY NaCl-RESTRICTED RATS
Thaw A.K.[1], Mann E.C.[1], Crooms S.[1], Hill D.L.[2] *[1]Psychology, Millsaps College, Jackson, MS; [2]Psychology, University of Virginia, Charlottesville, VA*

P13 318 GUSTATORY DETECTION OF A FREE FATTY ACID, LINOLEIC ACID, BY RATS.
McCormack D.N., Herzog P., Webster K.L., Pittman D.W. *Psychology, Wofford College, Spartanburg, SC*

P14 319 THRESHOLD FOR THE DETECTION OF ETHANOL SOLUTIONS BY THE RAT
Smith J., Denbleyker M., Ferrence K., Smith P. *Psychology, Florida State University, Tallahassee, FL*

P15 320 LINOLEIC ACID ALTERS LICKING RESPONSES TO SWEET, SOUR, AND SALT TASTANTS IN RATS.
Herzog P., McCormack D.N., Webster K.L., Pittman D.W. *Psychology, Wofford College, Spartanburg, SC*

P16 321 THE RELATIVE STRENGTH OF THERMAL CUES IN SHORT-TERM FEEDING BEHAVIOR
Smith P.L., Smith J.C. *Psychology, Florida State University, Tallahassee*

P17 322 BEHAVIORAL AND IMMUNOHISTOCHEMICAL STUDIES FOR THE CONDITIONED TEMPERATURE AVERSION
Sako N.[1], Ohashi R.[1], Sakai N.[2], Sugimura T.[1] *[1]Oral Physiology, Asahi University, Motosu, Gifu, Japan; [2]Neuroscience Research Institute, Japan Society for Promoting Science (AIST), Tsukuba, Ibaraki, Japan*

P18 323 SALIVARY GURMARIN-BINDING PROTEINS INDUCED BY GYMNEMA-CONTAINING DIET IN RATS
Yamada A.[1], Katsukawa H.[2], Sugita D.[3], Nakata M.[4], Ninomiya Y.[5] *[1]Sect. Oral Neurosci.,and Pediatric Dentistry, Grad. Sch. Dental Sci., Kyushu University, Fukuoka, Japan; [2]Dept. Oral. Physiol., Dent., Asahi Univ., Hozumi, Japan; [3]Central Laboratory, Lotte Co., LTD., Saitama, Japan; [4]Sect. Pediatric Dentistry, Grad. Sch. Dental Sci., Kyushu University, Fukuoka, Japan; [5]Sect. Oral Neurosci., Grad. Sch. Dental Sci., Kyushu University, Fukuoka, Japan*

P19 324 EFFECTS OF ASTRINGANTS, TASTANTS, AND FLAVORANTS ON ORAL TEXTURE
De Wijk R.A.[1], Prinz J.F.[2], Engelen L.[2], Janssen A.M.[3] *[1]ATO-DLO, Wageningen, Netherlands; [2]Utrecht Medical Center, Utrecht, Netherlands; [3]Wageningen Center for Food Sciences, Netherlands*

P20 325 THE IMPACT OF ETHANOL AND TOBACCO SMOKE ON INTRANASAL EPITHELIUM IN THE RAT
Vent J.[1], Irwin S.[1], Haynatzki G.[2], Gentry-Nielsen M.J.[3], Leopold D.A.[1], Hallworth R.[4] *[1]Otolaryngology, University of Nebraska Medical Center, Omaha, NE; [2]Medicine, Creighton University, Omaha, NE; [3]Medical Microbiology and Immunology, Creighton University; [4]Biomedical Sciences, Creighton University*

P21 326 TASTE PERCEPTION IN MICE BEARING A HUMAN ORAL SQUAMOUS CELL CARCINOMA
Lee J.[1], Cha M.[2], Choi S.[2], Moon Y.[3], Jahng J.[2] *[1]Oral & Maxillofacial Surgery, Seoul National Univ. Coll. Dentistry, Seoul, South Korea; [2]Pharmacology, Yonsei University College of Medicine, Seoul, South Korea; [3]Biology, Catholic Univ. Med. Coll., Seoul, South Korea*

Oscillations & Synchronization in Olfaction

P22 333 GENERATION MECHANISM OF EOG OSCILLATIONS IN THE RAINBOW TROUT
Suzuki N.[1], Takahata M.[1], Shoji T.[2] *[1]Aniimal Behavior & Intelligence, Division of Biological Science, Graduate School of Science, Hokkaido University, Sapporo, Hokkaido, Japan; [2]School of Marine Sciecne & Technology, Tokai University, Shimizu, Shizuoka, Japan*

P23 334 VOMEROPHERINS PRODUCE LOW-FREQUENCY CALCIUM OSCILLATIONS IN HUMAN VOMERONASAL NEURONS
Winegar B., Monti-Bloch L. *Pherin Pharmaceuticals, Mountain View, CA*

P24 335 REDUCED EXTERNAL CALCIUM OR POTASSIUM CHANNEL BLOCKADE EVOKES BURSTING IN CRAYFISH PARASOL CELLS
Mellon D. *Biology, University of Virginia, Charlottesville, VA*

P25 336 ODOR-INDUCED SYNCHRONY OCCURS AMONG CATFISH OLFACTORY BULB NEURONS HAVING SIMILAR ODORANT SELECTIVITIES IRRESPECTIVE OF THEIR BULBAR LOCATION WITHIN THE AMINO ACID CHEMOTOPIC ZONE
Nikonov A., Caprio J.T. *Biological Sciences, Louisiana State University, Baton Rouge, LA*

P26 337 PERSISTENT FAST OSCILLATORY ACTIVITY IN THE RAT OLFACTORY BULB IS MEDIATED BY CHEMICAL AND ELECTRICAL SYNAPSES IN VITRO.
Friedman D., Strowbridge B.W. *Case Western Reserve University, Cleveland, OH*

P27 338 ODOR-INDUCED OSCILLATIONS IN RAT OLFACTORY BULB
Scott J.W., Sherrill L. *Cell Biology, Emory University, Atlanta, GA*

Olfactometry & Gustometry

P28 339 A TEMPORAL AUTOMATED SYSTEM FOR TASTE EXPERIMENTS
Ashkenazi A., Buckley J., D'Alessandro T., Dirubba A., Fritz M., Goodman R., Marks L.E. *J. B. Pierce Laboratory and Yale University, New Haven, CT*

P29 340 HOW TO MAKE AND MEASURE SMELLS: PRACTICAL LESSONS IN OLFACTOMETRY
Schmidt R., Cain W.S. *Chemosensory Perception Laboratory, Surgery (Otolaryngology), University of California, San Diego, La Jolla, CA*

P30 341 DEVELOPMENT OF A PRECISION OLFACTOMETER
Hastings L.[1], Doty R.L.[2] *[1]Sensonics, Inc., Haddon Heights, NJ; [2]Smell and Taste Center, University of Pennsylvania, Philadelphia, PA*

P31 342 NEW TECHNIQUE IN REAL-TIME MONITORING OF CHEMOSENSORY STIMULI FOR EVENT-RELATED POTENTIALS
Kobayakawa T., Toda H., Yamada H., Saito S. *Neuroscience Research Institute, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan*

P32 343 IMPROVEMENTS TO AN OLFACTOMETER FOR PSYCHOPHYSIOLOGICAL AND FMRI STUDIES OF OLFACTORY PROCESSES
Lorig T.[1], Gould M.[2], Dalton P.[2] *[1]Psychology, Washington and Lee University, Lexington, VA; [2]Monell Chemical Senses Center, Philadelphia, PA*

P33 344 SINGLE-PASS ENVIRONMENTAL CHAMBER FOR QUANTIFYING HUMAN RESPONSES TO AIRBORNE CHEMICALS
Suarez J.C., Warmath D.S., Koetz K.P., Hood A.F., Thompson M.L., Kendal-Reed M.S., Walker D.B., Walker J.C. *Sensory Research, Florida State University, Tallahassee, FL*

Vomeronasal Chemoreception

P34 345 HUMAN V1-SUBTYPE VOMERONASAL RECEPTORS
Sangameswaran L.[1], Edwards D., Tran L., Raghu G. *Pherin Pharmaceuticals, Mountain View, CA*

P35 346 SPECIES-SPECIFICITY IN PHEROMONE RECEPTOR LOCI?
Lane R.P.[1], Cutforth T.[2], Axel R.[2], Hood L.[3], Trask B.J.[4] *[1]Molecular Biology and Biochemistry, Wesleyan University, Middletown, CT; [2]Biochemistry and Molecular Biophysics, Columbia University, New York, NY; [3]The Institute for Systems Biology, Seattle, WA; [4]Fred Hutchinson Cancer Research Center, Seattle, WA*

P36 347 ELECTROPHYSIOLOGICAL CHARACTERIZATION OF VOLTAGE-ACTIVATED PROPERTIES IN VOMERONASAL NEURONS ISOLATED FROM ADULT MALE AND FEMALE MICE
Dean D., Mazzatenta A., Menini A. *SISSA (Scuola Internazionale Superiore di Studi Avanzati), Trieste, Italy*

P37 348 THE ROLE OF GQ/11 IN SIGNAL TRANSDUCTION IN THE VOMERONASAL ORGAN
Miller S., Napier A., Wekesa K. *Biological Sciences, Alabama State University, Montgomery, AL*

P38 349 IMMUNOHISTOCHEMISTRY OF THE CANINE VOMERONASAL ORGAN
Dennis J.C.[1], Algier J.G.[2], Morrison E.[1] *[1]Anatomy, Physiology, Pharmacology, Auburn University, Auburn, AL; [2]College of Veterinary Medicine, Auburn University*

P39 350 A 20 KD PROTEIN COMPONENT OF MALE *PLETHODON SHERMANI* PHEROMONE ACTIVATES FEMALE *P. SHERMANI* VOMERONASAL NEURONS
Wirsig-Wiechmann C.R.[1], Houck L.D.[2], Feldhoff P.W.[3], Shaikh A.[1], Feldhoff R.C.[3] *[1]Cell Biology, University of Oklahoma, Oklahoma City, OK; [2]Zoology, Oregon State University, Corvallis, OR; [3]Biochemistry and Molecular Biology, University of Louisville, Louisville, KY*

P40 351 A PROTEOMIC ANALYSIS OF MUCOSAL PROTEINS IN THE VNO DUCT OF THE ASIAN ELEPHANT: CONTINUING THE HUNT FOR PHEROMONE BINDING PROTEINS.
Greenwood D.R.[1], Rasmussen L.E.[2] *[1]Gene Technologies, HortResearch, Auckland, New Zealand; [2]Oregon Graduate Institute of Science & Technology, Beaverton, OR*

P41 352 HUMAN VOMERONASAL ORGAN CHANGES DURING THE MENSTRUAL CYCLE
Monti-Bloch L., Linder C., Allen D. *Physiology/Pharmacology, Pherin Pharmaceuticals, Mountain View, CA*

P42 353 RELAXATION OF SELECTIVE PRESSURE ON AN ESSENTIAL COMPONENT OF VOMERONASAL TRANSDUCTION DURING PRIMATE EVOLUTION
Liman E.R., Innan H. *Biological Sciences, University of Southern California, Los Angeles, CA*

P43 354 ADULT HUMAN VOMERONASAL EPITHELIUM EXPRESS MOLECULAR MARKERS OF NEURON-LIKE ACTIVITY
Diaz V.[1], Morales A.[1], Castell A.[2] *[1]Reproductive Biology, National Institute of Medical Sciences and Nutrition, Mexico; [2]School of Medicine, National Autonomous University of Mexico, Mexico*

Human Olfaction: Psychophysics

P44 355 THE LONG TERM EFFECT OF NASAL DILATORS ON NASAL ANATOMY AND OLFACTORY ABILITY
Lyng G.D.[1], Hornung D.E.[1], Leopold D.A.[2], Irwin S.B.[3], Vent J.[2] *[1]Biology, St. Lawrence University, Canton, NY; [2]Otolaryngology-Head and Neck Surgery, University of Nebraska Medical Center, Omaha, NE; [3]Otolaryngology-Head and Neck Surgery, Oregon Health Sciences Center, Portland, OR*

P45 356 CHARACTERIZATION OF THE SNIFF MAGNITUDE TEST
Niergarth K.A.[1], Dulay M.F.[2], Gesteland R.C.[3], Frank R.A.[2] *[1]Emerging Concepts, Inc., Cincinnati, OH; [2]Dept. of Psychology, University of Cincinnati, OH; [3]Dept. of Cell Biology, University of Cincinnati*

P46 357 THE SNIFF MAGNITUDE TEST: A SENSORY MEASURE MINIMALLY INFLUENCED BY COGNITIVE FACTORS
Dulay M.F.[1], Niergarth K.A.[2], Shear P.K.[1], Frank R.A.[1], Gesteland R.C.[3] *[1]Psychology, University of Cincinnati, OH; [2]Emerging Concepts, Inc., Cincinnati, OH; [3]Cell Biology, University of Cincinnati*

P47 358 DETECTION LATENCY FOR GOOD AND BAD SMELLS
Jacob T.J., Townsend J., Wang L. *School of Biosciences, Cardiff University, Cardiff, United Kingdom*

P48 359 ADAPTATION TO GOOD AND BAD SMELLS
Jacob T.J., Wang L., Fraser C., O'Connor S. *School of Biosciences, Cardiff University, Cardiff, United Kingdom*

P49 360 CONTRASTING ACTIVATION OF HUMAN BRAIN BY COMPLEX DESIGNED FRAGRANCES
Yang Q.X.[1], Wang J.[1], Eslinger P.J.[2], Smith M.B.[1], Ansari R.[3], Richardson A.[3], Behan J.[3] *[1]Radiology, Pennsylvania State University, Hershey, PA; [2]Neurology, Pennsylvania State University, Hershey, PA; [3]Technical Affairs, Quest International Fragrance Company, Mount Olive, NJ*

P50 361 OLFACTORY EFFECTS OF ENVIRONMENTAL MALODOR
Bell J., Hirsch A.R. *Rush Presbyterian St. Luke's Medical Center, Chicago, I*

P51 362 ODOR SIMILARITY INDEX USING BINARY MIXTURES
Chida M.[1], Sone Y.[1], Tamura H.[2], Nagata H.[1], Shikata H.[1] *[1]Tobacco Science Research Center, Japan Tobacco Inc., Yokohama, Japan; [2]Bioresource Science, Kagawa University, Kita-Gun,Kagawa, Japan*

P52 363 OLFACTORY PERFORMANCE AND HEALTH STATUS: A EUROPEAN SURVEY
Rouby C., Thomas-Danguin T. *Universite Lyon1, Lyon, France*

P53 364 SNIFFING DURING FORMATION OF OLFACTORY IMAGERY
Bremner E.[1], Johnson B.N.[2], Mainland J.D.[1], Young N.[1], Aframian D.[1], Bensafi M.[1], Sobel N.[1] *[1]Neuroscience, University of California, Berkeley, CA; [2]Bioengineering, University of California, Berkeley*

P54 365 SUPRA-THRESHOLD EVALUATIONS OF OLFACTORY STIMULI BY PROP CLASSIFIED INDIVIDUALS
Kirkmeyer S.V.[1], Tepper B.J.[2] *[1]International Flavors & Fragrances, Inc., Dayton, NJ; [2]Food Science, Rutgers University, New Brunswick, NJ*

P55 366 THE RELATIONSHIP BETWEEN THE NASAL CYCLE AND PREFERRED HANDEDNESS
Stein E.J.[1], Brzuszkiewicz L.[1], Searleman A.[1], Hornung D.E.[2] *[1]Psychology, St. Lawrence University, Canton, NY; [2]Biology, St. Lawrence University, Canton, NY*

P56 367 RATING PROPERTIES OF ODORANTS
Pouliot S., Hudry J.L., Jones-Gotman M. *Montreal Neurological Institute, Canada*

P57 368 ODOR QUALITY AND QUANTITY IN CROSS-ADAPTATION
Warren C.B.[1], Schmidt R.[1], Wise P.[1], Polak E.H.[2], Cain W.S.[1] *[1]Chemosensory Perception Lab, Surgery (Otolaryngology), University of California, San Diego, La Jolla, CA; [2]Laboratoire de Neurophysiologies Enseignement, Université Paris VI, Paris, France*

P58 369 INDIVIDUAL DIFFERENCES IN HUMAN OLFACTORY COMMUNICATION OF EMOTIONS
Chen D.[1], McClintock M.K.[2] *[1]Psychology, Rice University, Houston, TX; [2]Institute for Mind and Biology, University of Chicago, Chicago, IL*

P59 370 OLFACTORY DIFFERENCES BETWEEN PREGNANT AND NON-PREGNANT WOMEN
Broman D.A.[1], Olofsson J.[1], Olsson M.J.[2], Nordin S.[1] *[1]Department of Psychology, Umeå University, Umeå, Sweden; [2]Department of Psychology, Uppsala University, Uppsala, Sweden*

P60 371 A LONGITUDINAL STUDY OF FOOD AVERSIONS AND CRAVINGS IN PREGNANT WOMEN
Nordin S.[1], Broman D.A.[1], Olofsson J.[1], Wulff M.[2] *[1]Psychology, Umeå University, Umeå, Sweden; [2]Obstetrics and Gynecology, Umeå Univ.*

P61 372 EFFECTS OF AGE, SEX, AND SIDE OF STIMULATION ON CHEMOSENSORY EVENT-RELATED POTENTIALS
Larsson M.[1], Lundstrom J.N.[2], Frasnelli J.[3], Hummel T.[3] *[1]Psychology, Stockholm University, Sweden; [2]Psychology, Uppsala University, Sweden; [3]University of Dresden Medical School, Germany*

P62 373 EFFECTS OF STIMULATED NOSTRIL ON OLFACTORY EVENT-RELATED POTENTIALS
Olofsson J.[1], Broman D.A.[1], Gilbert P.E.[2], Nordin S.[1], Dean P.[3], Murphy C.[2] *[1]Psychology, Umeå University, Sweden; [2]Surgery, University of California, San Diego School of Medicine, San Diego, CA; [3]Psychology, San Diego State University, San Diego, CA*

P63 374 OLFACTORY EVOKED POTENTIALS DURING MONORHINAL VERSUS BIRHINAL STIMULATION WITH LINALOOL
Kobal G., Wille C., Mueller C., Kettenmann B. *University of Erlangen-Nuremberg, Erlangen, Germany*

P64 375 INFLUENCES OF ETHANOL INGESTION ON OLFACTORY FUNCTION: SPECIFIC TO ETHANOL ODOR
Doty R.L., Patel S.J., Bollhoefer A. *Smell and Taste Center, University of Pennsylvania, Philadelphia, PA*

Sunday, April 13, 2003

Morning Coffee, 7:30-9:00 AM *(Prefunction Area)*

SLIDES

Sunday - 8:00-9:30 AM *(Salons C,D,E,F)*

Development of Chemoreceptor Cells *(Chairperson: Matt Wachowiak)*

8:00 327 NEUROTROPHINS ALTER SODIUM CHANNEL PROPERTIES OF EMBRYONIC TRIGEMINAL AND GENICULATE NEURONS.
Grigaliunas A.[1], Mistretta C.[2], Maccallum D.K.[3], Bradley R.[2] *[1]Kaunas Medical University, Kaunas, LT; [2]School of Dentistry, University of Michigan, Ann Arbor, MI; [3]Medical School, University of Michigan*

8:15 328 EACH SENSORY NERVE ARISING FROM THE GENICULATE GANGLION EXPRESSES A UNIQUE FINGERPRINT OF NEUROTROPHIN RECEPTOR GENES
Farbman A.I.[1], Sollars S.I.[2], Guagliardo N.[3], Hill D.L.[3] *[1]Neurobiology and Physiology, Northwestern University, Evanston, IL; [2]Psychology, University of Nebraska, Omaha, NE; [3]Psychology, University of Virginia, Charlottesville, VA*

8:30 329 RETINOIC ACID AND NEUROGENESIS IN POSTNATAL RAT OLFACTORY EPITHELIUM
Asson-Batres M., Smith W.B. *Biological Sciences, Tennessee State University, Nashville, TN*

8:45 330 AN INDUCIBLE TRANSCRIPT EXPRESSED BY REACTIVE EPITHELIAL CELLS THAT PROLIFERATE LOBSTER OLFACTORY SENSORY NEURONS
McClintock T.S., Nickell M.D., Stoss T., Derby C.D. *[1]Physiology, University of Kentucky, Lexington, KY; [2]Biology, Georgia State University, Atlanta, GA*

9:00 332 IDENTIFICATION OF MULTIPOTENT OLFACTORY PROGENITOR CELLS IN VITRO BY VIDEOMICROSCOPY AND IMMUNOCYTOCHEMISTRY
Cunningham A.M., Marlicz W. *Developmental Neurosci., Faculty of Medicine, University of New South Wales, Sydney, Australia*

Mid morning coffee available, 9:15-9:45 AM *(Prefunction Area)*

SLIDES

Sunday - 9:30-11:45 AM *(Salons C,D,E,F)*

Functional Organization of Olfactory Systems *(Chairperson: Tim McClintock)*

9:30 376 PHEROMONE CODING BY THE MAMMALIAN MAIN OLFACTORY EPITHELIUM
Leinders-Zufall T.[1], Ziesmann J.[1], Puche A.C.[1], Bock R.[1], Ma W.[2], Novotny M.V.[2], Zufall F.[1] *[1]Anatomy & Neurobiology, University of Maryland, Baltimore; [2]Institute for Pheromone Research and Dept. of Chemistry, Indiana University, Bloomington, IN*

9:45 331 HUMAN SPECIFIC LOSS OF OLFACTORY RECEPTOR GENES
Gilad,Y.[1,2],Man,O.[2], Paabo,S.[1], Lancet,D.[2] *[1]Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany; [2]Dept. of Molecular Genetics, Weizmann Institute, Rehovot, Israel*

10:00 377 MOLECULAR ORGANIZATION OF THE MOUSE SEPTAL ORGAN
Ma M.[1], Iwema C.L.[2], Liu J.[3], Greer C.A.[2], Shepherd G.M.[3] *[1]Neuroscience, University of Pennsylvania, Philadelphia, PA; [2]Neurosurgery, Yale University, New Haven, CT; [3]Neurobiology, Yale University, New Haven, CT*

10:15 378 MAPPING ODOR RECEPTORS TO NEURONS
Goldman A.L.[1], Lessing D.[1], Van Der Goes Van Naters W.[1], Warr C.[2], De Bruyne M.[3], Carlson J.R.[1] *[1]Molecular, Cellular, Developmental Biology, Yale University, New Haven, CT; [2]School of Biological Sciences, Monash University, Melbourne, Australia; [3]Freie Universitaet Berlin, Berlin, Germany*

10:30 379 THE GR21A RECEPTOR AND CARBON DIOXIDE PERCEPTION IN *DROSOPHILA*
De Bruyne M.[1], Schwarz S.[1], Wendt M.[1], Regnery B.[1], Galizia C.G.[1], Fiala A.[2], Diegelmann S.[2], Buchner E.[2], Carlson J.R.[3] *[1]Freie Universitaet Berlin, Berlin, Germany; [2]Theodor-Boveri-Institut, Wuerzburg, Germany; [3]Yale University, New Haven, CT*

10:45 380 HIGH THROUGHPUT MICROARRAY DETECTION OF OLFACTORY RECEPTOR GENE EXPRESSION
Zhang X.[1], Rogers M.[1], Zhang X.[1], Zou D.[1], Liu J.[2], Ma M.[2], Shepherd G.M.[2], Firestein S.[1] *[1]Biological Sciences, Columbia University, New York, NY; [2]Neurobiology, Yale Universit*

11:00 381 PROCESSING OF ODOR BLENDS IN THE INSECT ANTENNAL LOBE
Kleineidam C.[1], Vickers N.J.[1], Linn C.[2] *[1]Biology, University of Utah, Salt Lake City, Utah; [2]Entomology, Cornell University, Geneva, New York*

11:15 382 FUNCTIONAL ORGANIZATION OF INPUT TO THE MOUSE OLFACTORY BULB GLOMERULUS VISUALIZED WITH TWO-PHOTON CALCIUM IMAGING
Wachowiak M.[1], Friedrich R.W.[2] *[1]Biology, Boston University, Boston, MA; [2]Biomedical Optics, Max-Planck-Institute for Medical Research, Heidelberg, Germany*

11:30 383 GLOBAL REPRESENTATION OF CHEMICAL STRUCTURES IN THE MOUSE OLFACTORY BULB REVEALED BY FMRI
Xu F., Liu N., Kida I., Rothman R.L.[1], Hyder F., Shepherd G.M.
Neurobiology and Diagnostic Radiology, Yale University, New Haven, CT

POSTERS

Sunday - 8:00 AM-Noon *(Salon A,B,G,H)*

Olfactory Receptor Cells

P1 384 EFFECT OF TAURINE SUPPRESSION ON THE OLFACTORY SYSTEM OF THE MOUSE
Witt M.[1], Roth C.[1], Hummel T.[2], Warskulat U.[3], Bidmon H.[4] *[1]Anatomy, University of Technology, Dresden, Germany; [2]University of Dresden Medical School, Dresden, Germany; [3]Clinic for Gastroenterology, Hepatology and Infectiology, Heinrich Heine University, Düsseldorf, Germany; [4]C & O Institute for Brain Research, Heinrich Heine University, Düsseldorf, Germany*

P2 385 NEW INTRACELLULAR STAINING TECHNIQUE APPLIED TO *DROSOPHILA* NEURONS
Wada S.[1], Kanzaki R.[2] *[1]Life and Environmental Sciences, University of Tsukuba, Tsukuba-shi, Ibaraki, Japan; [2]Biological Science, University of Tsukuba*

P3 386 DETECTING CHANGES OF OLFACTORY NEURON ACTIVITY
Blejec A. *Invertebrate Physiology, National Institute of Biology, Ljubljana, Slovenia*

P4 387 SHORT-TERM CULTURE OF *CAENORHABDITIS ELEGANS* CHEMOSENSORY NEURONS
Nickell T.[1], Kleene N.K.[2], Kleene S.J.[2] *[1]Univ. of Cincinnati College of Medicine, OH; [2]Cell Biology, Neurobiology & Anatomy, Univ. Cincinnati*

P5 388 THE USE OF FRESH POSTMORTEM HUMAN PERIPHERAL OLFACTORY TISSUE FOR PHYSIOLOGIC STUDY
Murrow B., Walton K., Michaels R., Jafek B., Leonard S., Restrepo D.
[1]University of Colorado Health Science Center, Denver, CO

P6 389 INHIBITION OF HEAT SHOCK PROTEIN INDUCTION IN MOUSE OLFACTORY EPITHELIUM BY IN VIVO ADMINISTRATION OF PURINERGIC RECEPTOR ANTAGONISTS
Hegg C.C., Davis K., Lucero M.T. *Physiology, University of Utah, Salt Lake City, UT*

Histological Profiles in Peripheral Gustatory Systems

P7 390 IMMUNOCYTOCHEMICAL CHARACTERIZATION OF PALATE TASTE BUDS IN MICE
Stone L.M.[1], Baker L.S.[1], Margolskee R.F.[2], Kinnamon S.C.[1] [1]*Biomedical Sciences, Colorado State University, Fort Collins, CO;* [2]*Medicine, Mount Sinai School of Medicine, New York, NY*

P8 391 MECHANICAL STIMULATION RELEASES SEROTONIN FROM RAT TASTE BUDS
Plonsky I.[1], Baur J.E.[2], Pereira E.[3], Roper S.D.[3] [1]*Lab. of Bioinformatics and Motion Control, Institute for Information Transmission Problems, Moscow, Russia;* [2]*Chemistry, Illinois State University, Normal, IL;* [3]*Physiology and Biophysics, University of Miami School of Medicine, Miami, FL*

P9 392 RADIATION INDUCED CHANGES IN HISTOLOGY AND BEHAVIOR IN THE SR90 TASTE LOSS MODEL
Nelson G.[1], Ferraro F.[2], Coonfield D.[2], Kiefer S.[2] [1]*Neurobiology, University of Alabama at Birmingham, AL;* [2]*Psychology, Kansas State University, Manhattan, KS*

P10 393 IMMUNOHISTOCHEMICAL CHARACTERIZATION OF GABA AND GAD IN FACIAL AND VAGAL NERVE INNERVATED TASTE BUDS OF CHANNEL CATFISH.
Eram M., Michel W.C. *Physiology, University of Utah, Salt Lake City, UT*

P11 394 HISTOCHEMICAL EVIDENCE FOR PRESYNAPTIC IONOTROPIC GLUTAMATE RECEPTORS ON PRIMARY GUSTATORY AFFERENT TERMINALS IN GOLDFISH
Huesa G., Finger T.E. *Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO*

Pheromones & Social Behavior

P12 395 THE GENERATION AND CONTROL OF INFORMATION CURRENTS TO EXCHANGE SOCIAL SIGNALS DURING CONSPECIFIC FIGHTS IN CRAYFISH.
Martin A., Bergman D.A., Moore P.A. *Biological Sciences, Bowling Green State University, Bowling Green, Ohio*

P13 396 SEX, DOMINANCE, AND INDIVIDUAL RECOGNITION SIGNALS IN LOBSTER HIERARCHIES.
Morschauser K.E., Atema J. *Boston University Marine Program, Marine Biological Laboratory, Woods Hole, MA*

P14 397 GENOME-WIDE ANALYSIS OF PHEROMONE-MEDIATED GENE EXPRESSION IN THE HONEY BEE
Grozinger C.M., Robinson G.E. *Entomology and Neuroscience Program, University of Illinois at Urbana-Champaign, Urbana, IL*

P15 398 THE ROLE OF HELIOTHINE HAIRPENCIL COMPOUNDS IN FEMALE *HELIOTHIS VIRESCENS* BEHAVIOR AND MATING
Hillier K.N., Vickers N.J. *University of Utah, Salt Lake City, UT*

P16 399 PHYSIOLOGICAL AND BEHAVIOURAL STUDIES SUGGEST THE USE OF SEX PHEROMONES DURING REPRODUCTIVE ACTIVITY OF THE ROUND GOBY *NEOGOBIUS MELANOSTOMUS*
Belanger A.J.[1], Petruniak J.[1], Gammon D.[1], Corkum L.D.[1], Li W.[2], Scott A.[3], Zielinski B.[1] [1]*Biological Sciences, University of Windsor, Windsor, Canada;* [2]*Fisheries and Wildlife, Michigan State University, East Lansing, Michigan;* [3]*Center for Environment, Fisheries and Aquatic Sciences, Weymouth, Dorset, United Kingdom*

P17 400 DISCRIMINATION OF SEMIOCHEMICALS BY THE CHILEAN LIZARD *LIOLAEMUS LEMNISCATUS*: ROLE OF OLFACTION AND VOMEROLFACTION
Labra A.[1], Desfilis E.[2] [1]*Ciencias Ecologicas, Universidad de Chile, Santiago, Chile;* [2]*Universidad de Valencia, Valencia, Spain*

P18 401 CHEMICAL EXPLORATION OF CONSPECIFIC ODORS IN FEMALE OPOSSUMS (*MONODELPHIS DOMESTICA*)
Halpern M., Dombrowski K., Zuri I. *Anat. & Cell Biol., SUNY Downstate Health Sciences Center, Brooklyn, NY*

P19 402 OLFACTORY MEMORY AND INDIVIDUAL RECOGNITION IN GOLDEN HAMSTERS
Lai W., Yu H.A., Chen A., Johnston R.E. *Psychology, Cornell University, Ithaca, NY*

P20 403 ACCURATE ODOR DISCRIMINATION IN THE ABSENCE OF ODOR PREFERENCE IN MALE VASOPRESSIN 1B RECEPTOR-KO MICE INDICATES ALTERED SOCIAL MOTIVATION
Kelliher K.R.[1], Zufall F.[1], Wersinger S.R.[2], Young W.S.[2] [1]*Anatomy & Neurobiology, Univ. Maryland at Baltimore, MD;* [2]*Section on Neural Gene Expression, National Institute of Mental Health, Bethesda, MD*

P21 404 MHC-BASED MATE CHOICE IN FEMALE RATS
Shaw-Taylor E.[1], McClintock M.K.[2] [1]*Psychology, University of Chicago, Illinois;* [2]*Psychology, University of Chicago, IL*

P22 405 RESPONSES OF FEMALE MOOSE TO FRACTIONATED URINE OF RUTTING MALE MOOSE (*ALCES ALCES GIGAS*)
Whittle C.L.[1], Bowyer R.[2], Duffy L.K.[3], Preti G.[4], Clausen T.P.[3]
[1]Chemistry & Biochemistry, and Biology & Wildlife, University of Alaska Fairbanks; [2]Biology & Wildlife, University of Alaska, Fairbanks; [3]Chemistry & Biochemistry, University of Alaska Fairbanks; [4]Monell Chemical Senses Center, Philadelphia, PA

P23 406 SOCIALLY-RELEVANT CHEMOSENSORY STIMULI SELECTIVELY ACTIVATE POSTERIOR MEDIAL AMYGDALA
Westberry J., Meredith M. *Program in Neuroscience, Florida State University, Tallahassee, FL*

P24 407 CHEMOSENSORY STIMULATION OF FOS IN MEDIAL AMYGDALA REFLECTS NEURAL ACTIVATION NOT SYNAPTIC ENHANCEMENT.
Blake C[1], Westberry J., Sirpal S., Weinburg D., Meredith M. *Program in Neuroscience, Florida State University, Tallahassee, FL*

P25 408 OLFACTORY SENSITIVITY FOR ANDROSTENONE IN THREE SPECIES OF NONHUMAN PRIMATES
Laska M.[1], Wieser A.[1], Hernandez Salazar L.[2] *[1]Medical Psychology, University of Munich, Munich, Germany; [2]Instituto de Neuro-Etologia, Universidad Veracruzana, Xalapa, Mexico*

Human Olfaction: Pheromones

P26 409 EFFECTS OF ANDROSTADIENONE ON MOOD AND PHYSIOLOGY INCREASE IN EMOTIONAL CONTEXTS
Bensafi M., Tsutsui T., Sobel N. *Neuroscience, University of California, Berkeley, CA*

P27 410 WHAT THE NOSE KNOWS: PREFERENCE FOR HUMAN BODY ODORS AS A FUNCTION OF GENDER AND GENDER PREFERENCE
Martins Y., Preti G., Wysocki C.J. *Monell Chemical Senses Center, Philadelphia, PA*

P28 411 ANDOSTRADIENONE´S IMPACT ON EMOTIONAL EXPERIENCE THROUGH MOOD INDUCTION
Freyberg R.[1], Wilson P.[2], Haviland-Jones J.[1] *[1]Rutgers, The State University of New Jersey, Piscataway, New Jersey; [2]International Flavors & Fragrances, Inc., Union Beach, NJ*

P29 412 INDIVIDUAL DIFFERENCES IN ODOR SENSITIVITY TO 4,16-ANDROSTADIEN-3-ONE
Lundstrom J.N., Lopes J., Olsson M.J. *Psychology, Uppsala University, Uppsala, Sweden*

P30 413 INDIVIDUAL DIFFERENCES (IDS) IN THE DETECTION OF HUMAN MOOD FROM AXILLARY ODOR
McGuire T.R.[1], Brahms J.[2], Morris C.[3], Haviland-Jones J.[4] *[1]Genetics, Rutgers, The State University of New Jersey, Piscataway, NJ; [2]Colgate Palmolive, Piscataway, NJ; [3]Biological Sciences, Rutgers; [4]Psychology, Rutgers*

Olfaction & Cognition

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