Program

The Association for Chemoreception Sciences presents the Sensory World of Olfaction and Taste

AChemS 2002

XXIVth Annual Meeting
April 24-28, 2002 • Sarasota, Florida
The Association for Chemoreception Sciences appreciates grant support from:

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

The Association for Chemoreception Sciences is also grateful for the generous support of its Corporate Sponsors:

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*Givaudan Corporation*

**Seventeenth Annual Takasago Award for Research in Olfaction**

*Takasago Corporation*

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* * *

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ASSOCIATION FOR CHEMORECEPTION SCIENCES

XXIV Annual Meeting

Wednesday, April 24, 2002

10AM - Noon  Education Outreach *(Gwiz Science Center)*

Noon - 5PM  Executive Committee *(Executive Board Room)*

5PM - 7:30PM  Registration *(Pre-function area)*

6:30PM - 8PM  Opening Buffet *(Salons A & B)*

8PM - 8:30PM  Welcome & Awards Ceremony *(Salons C, D, E & F)*
Dr. Stuart Firestein, President

8:30 - 9:30PM  GIVAUDAN LECTURE *(Salons C,D,E & F)*
Dr. Jon Kaas
Vanderbilt University

REORGANIZATION OF SENSORY MAPS AFTER SENSORY LOSS IN DEVELOPING AND ADULT PRIMATES

Chairperson: Dr. Alan Spector

9:30 - 10:00PM  Organizational Meeting for Students with Travel Awards *(Salon G)*
Dr. Alan Nighorn

9:30 - 10:30PM  Social Gathering and Cash Bar *(Pre-function area)*
Continental Breakfast, 7:30 AM - 9:00 AM (Prefunction Area)

SLIDES

Thursday - 8:00 AM - 9:45 AM

Functional Consequences of Manipulating Chemosensory Systems
Chairperson: John Bougher

8:00 2 SIGNAL TRANSDUCTION OF UMAMI TASTE BY GUSTDUCIN AND TRANSDUCIN
He W.1, Margolskee R.F.2, Damak S.3 1Physiology and Biophysics, Mount Sinai School of Medicine, New York, NY; 2Howard Huges Medical Institute, New York, NY

8:15 3 EFFECT OF TRANSGENIC OVER-EXPRESSION OF NR2B ON OLFACTORY MEMORY PERFORMANCE IN THE MOUSE
White T.L.1, Youngentob S.L.1 1Neuroscience & Physiology, State University of New York Health Science Center at Syracuse, Syracuse, NY

8:30 4 ODOR DETECTION AND ODOR DISCRIMINATION IN BILATERALLY OLFACTORY BULBECTOMIZED RATS
Slotnick B.1, Pickett E.1, Cockerham R.1 1Psychology, American University, Washington, DC

8:45 5 CNGA4 NULL MICE EXHIBIT BEHAVIORAL DEFECTS IN ODOR THRESHOLD SENSITIVITY AND ADAPTATION
Kellar K.R.1, Ziesmann J.G., Munger S.D.1, Reed R.R.1, Zufall F.1 1Dept. of Anatomy and Neurobiology, University of Maryland at Baltimore, Baltimore, MD; 2HHMI and Dept. of Molecular Biology and Genetics, Johns Hopkins University, Baltimore, MD

9:00 6 VANASO IS A QUANTITATIVE TRAIT LOCUS FOR DROSOPHILA OLFACCOUNT BEHAVIOR
Fanara J.J.1, Robinson K.O.1, Mackay T.F.1, Anholt R.R.1 1W. M. Keck Center for Behavioral Biology, North Carolina State University, Raleigh, NC

7:15 7 REGULATION OF INSECT OLFACTION BY SENSORY ARRESTINS
Merrill C.E.1, Riesgo-Escovar J.1, Pitts R.J.1, Carlson J.R.1, Zwiebel L.J.1 1Department of Biological Sciences, Vanderbilt University, Nashville, TN; 2Department of Molecular, Cellular, and Developmental Biology, Yale University, New Haven, CT

9:30 8 GENETIC MANIPULATION OF ODOR RECEPTORS IN DROSOPHILA
Shiraiva T.1, Van Der Goes Van Naters W.1, Lessing D.1, Warr C.1, De Bruyne M.1, Carlson J.R.1 1Molecular, Cellular and Developmental Biology, Yale Univ., New Haven, CT; 2School of Biol., Sci., Monash Univ., Clayton, VIC, Australia; 3Institut fur Neurobiologie, Freie Univ., Berlin, Germany

Mid morning coffee available 9:30 AM - 10:00 AM

SYMPOSIUM

Thursday - 10:00 AM - 12:15 PM

Sensory Coding in the Molecular Era: The Neural Representation of Gustatory, Olfactory, and Somatosensory Stimuli
Chairperson: Susan P. Travers

10:00 9 Susan P. Travers
INTRODUCTION: SENSORY CODING IN THE MOLECULAR ERA: THE NEURAL REPRESENTATION OF GUSTATORY, OLFactory AND SOMATOSENSORY STIMULI
Travers S.P.1 1Oral Biology, Ohio State University, Columbus, OH

10:05 10 Kenneth O. Johnson
A COMBINED PSYCHOPHYSICAL AND NEUROPHYSIOLOGICAL STUDY OF THE NEURAL MECHANISMS OF TACTILE TEXTURE PERCEPTION
Johnson K.O.1, Hsiao S.S.1, Yoshioka T.1 1Neuroscience (SOM), Johns Hopkins University, Baltimore, MD
10:35  11  Miguel A. Nicolelis
SIMILARITIES BETWEEN THE DYNAMIC AND DISTRIBUTED NATURE OF NEURONAL ENSEMBLE ACTIVITY IN THE PRIMARY SOMATOSENSORY AND GUSTATORY CORTICES
Nicolelis M.A. 1  (Department of Neurobiology, Duke University Medical Center, Durham, NC)

11:05  12  David D. Smith
INDIVIDUAL NEURONS AND TASTE QUALITY CODING
Smith D.V. 1  (Anatomy & Neurobiology, University of Maryland, Baltimore, Baltimore, MD)

11:35  13  Michael Leon
OLFACTORY CODING
Leon M. 1, Johnson B.A. 1  (Neurobiology and Behavior, University of California, Irvine, Irvine, CA)

12:05  DISCUSSION

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

POSTERS

Thursday - 8:00 AM - 12:00 PM

Ion Channels

Th-am-1  14  LIVE CELL IMAGING OF MG2+ INFUX DURING THE BIOTIN OFF-RESPONSE IN PARAMECIIUM
Bell W.E. 1, Green M.H. 1  (Department of Biology, Virginia Military Institute, Lexington, VA)

Th-am-2  15  USE OF REAL-TIME PCR TO QUANTITATE DIFFERENCES IN EXPRESSION OF DELAYED RECTIFYING POTASSIUM CHANNELS IN TASTE CELLS
Hansen D.R. 1, Kwon S. 1, Gilbertson T.A. 1  (Biology, Utah State University, Logan, UT)

Th-am-3  16  EXPRESSION OF THE CLC FAMILY OF CHLORIDE CHANNELS IN TASTE CELLS
Rao S. 1, Hansen D.R. 1, Gilbertson T.A. 1  (Biology, Utah State University, Logan, UT)

Th-am-4  17  THE CA2+-ACTIVATED CL CONDUCTANCE IN RAT Olfactory Receptor Cells
Reisert J. 1, Yau K. 1, Frings S. 1  (Department of Neuroscience, Johns Hopkins School of Medicine, Howard Hughes Medical Institute, Baltimore, MD; Institut für Biologische Informationsverarbeitung, FZ Juelich, Juelich, Germany)

Th-am-5  18  IP3 RECEPTORS AND OLFACTORY RECEPTOR TRANSDUCTION
Liu G. 1, Badeau R. 1, Tanimura A. 1, Talamo B. 1  (Neuroscience, Tufts University School of Medicine, Boston, MA, U.S.; Dental Pharmacology, U. of Hokkaido, Japan)

Th-am-6  19  EXPRESSION OF NA+/CA2+/(K+) EXCHANGERS IN Olfactory Receptor Neurons (ORNs)
Pyrski M.M. 1, Margolis J.W. 1, Polumari S.K. 1, Bell G. 1, Ruknudin A. 1, Schulze D.H. 1, Margolis F.L. 1  (Anatomy & Neurobiology, UMB, Baltimore, MD; Immunology, UMB, Baltimore, MD)

Th-am-7  20  CALMODULIN-MEDIATED OLFACTORY ADAPTATION: THE ROLES OF CAMP-GATED CHANNEL SUBUNITS
Bradley J. 1, Böning W. 1, Yau K. 1, Frings S. 1  (Department of Neuroscience, Johns Hopkins University, Baltimore, MD; IBI-1, Forschungszentrum, Jülich, Germany)

Th-am-8  21  MULTIPLE SUBTYPES OF VOLTAGE-GATED SODIUM CHANNELS ARE EXPRESSED BY MOUSE Olfactory Sensory Neurons
Frenz C.T. 1, Dionne V.E. 1  (Biology, Boston University, Boston, MA)

Th-am-9  22  CALCIUM SENSITIVITY OF A SODIUM-ACTIVATED NON-SELECTIVE CATION CHANNEL IN LOBSTER Olfactory Receptor Neurons
Bobkov Y.V. 1, Ache B.W. 1  (Whitney Laboratory, Center for Smell and Taste, and McKnight Brain Institute, University of Florida, Gainesville, FL)

Th-am-10  23  MOLECULAR AND CELLULAR CHARACTERIZATION OF AN IH-CHANNEL FROM LOBSTER Olfactory Receptor Neurons
Mark T. 1, Bobkov V. 1, Wetzel C.H. 1, Gisselmann G. 1, Ache B.W. 1, Hatt H. 1  (Cell Physiology, Ruhr-University Bochum, Bochum, Germany; Whitney Laboratory, Center for Smell and Taste, and McKnight Brain Institute, University of Florida, Gainesville, FL)
Development of the Olfactory System

Th-am-11 24 OVEREXPRESSION OF XDLL3 AND XDLL4 RESULTS IN SIMILAR MORPHOLOGICAL CHANGE IN XENOPUS LAEVIS
Cox J.T.1, Burd G.D.1 Molecular and Cellular Biology, University of Arizona, Tucson, AZ

Th-am-12 25 REPRESENTATIONAL DIFFERENCE ANALYSIS OF METAMORPHIC CLIMAX VS. PRE-METAMORPHIC XENOPUS LAEVIS NOSES
Walworth E.S.1, Burd G.D.1 Molecular and Cellular Biology, University of Arizona, Tucson, AZ

Th-am-13 26 IMMUNO-LOCALIZATION OF PACAP IN THE DEVELOPING AND MATURE RODENT VNO
Johnson E.W.1, Hegg C.C.2, Lucero M.T.2 Biological Sciences, Idaho State University, Pocatello, ID; Physiology, University of Utah, Salt Lake City, UT

Th-am-14 27 LOCALIZATION OF ALDH 1 IN RAT OLFACTORY GLIA AND EFFECTS OF VITAMIN A-DEFICIENCY ON ITS EXPRESSION
Asson-Bates M.1 Biological Sciences, Tennessee State University, Nashville, TN

Th-am-15 28 GROWING OLFACTORY RECEPTOR AXONS FROM MANDUCA SEXTA DISPLAY DIFFERENT INTERACTIONS WITH CENTRAL AND PERIPHERAL GLIA IN VITRO.
Tucker E.S.1, Oland L.A.2, Tolbert L.P.3 Cell Biology and Anatomy, University of Arizona, Tucson, AZ; ARL Division of Neurobiology, University of Arizona, Tucson, AZ

Th-am-16 29 A ROLE FOR EPH/EPHRIN SIGNALING IN DEVELOPING OLFACTORY AXONS
Kaneko M.1, Nighorn A.1 ARLDN, University of Arizona, Tucson, AZ

Th-am-17 30 DIFFERENCES IN LECTIN-BINDING CONSTITUENTS ON OLFACTORY RECEPTOR AXONS PROJECTING TO ORDINARY AND SEXUALLY DIMORPHIC GLOMERULI IN MALE AND FEMALE MANDUCA SEXTA.
Gibson N.J.1, Hildebrand J.G.1, Tolbert L.P.3 ARL Div. of Neurobiology, University of Arizona, Tucson, AZ

Th-am-18 31 NCS-1 IN THE DEVELOPING OLFACTORY SYSTEM.
Trelaor H.B.1, Uboha U.1, Jeromein A.2, Greer C.A.1 Neurosurgery, Yale University, New Haven, CT; Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, Canada

Aging

Th-am-24 37 SUPEROXIDE DISMUTASE IMMUNOREACTIVITY IN THE HUMAN OLFACTORY BULB: EFFECT OF AGE IN ALZHEIMER'S DISEASE PATIENTS
Getchell M.L.1, Buch S.2, Davis D.G.2, Shah D.S.2, Getchell T.V.3 Sanders-Brown Center on Aging, U. of KY, Lexington, KY

Th-am-25 38 APOPTOTIC CELL DEATH IN THE AGING OLFACTORY EPITHELIUM
Robinson A.M.1, Conley D.B.2, Shinners M.J.2, Kern R.C.1 Otolaryngology-HNS, Northwestern University, Chicago, IL

Th-am-26 39 THE IMPACT OF AGING AND MEDICATIONS ON FUNCTIONAL CHARACTERISTICS OF HUMAN OLFACTORY NEURONS.
Rawson N.E.1, Gomez G.1, Adamek G.1, Pribitkin E.A.1, Cowart B.J.1 Monell Chemical Senses Center, Phila., PA; Dept. Otolaryngology, Head and Neck Surgery, Thomas Jefferson Univ., Phila., PA
Disease and Clinical Conditions

Th-am-35 48 PARKINSON’S DISEASE AS POSSIBLE CAUSE OF IDIOPATHIC OLFACTORY LOSS
Hummel T., Frasnelli J., Mueller A., Muengersdorf A., Sommer U., Reichmann H.  
*Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany;  
Neurology, University of Dresden Medical School, Dresden, Germany*

Th-am-36 49 OLFACTORY DYSFUNCTION IN DEGENERATIVE ATAXIAS
Connely T., Farmer J., Lynch D., Doty R.  
*Smell and Taste Center, University of Pennsylvania, Philadelphia, PA;  
Division of Medical Genetics, University of Pennsylvania, Philadelphia, PA;  
Neurology, University of Pennsylvania, Philadelphia, PA*

Th-am-37 50 CORRELATES OF ODOR DISCRIMINATION, IDENTIFICATION AND RECOGNITION MEMORY TASK PERFORMANCE IN PATIENTS WITH EPILEPSY
Dulay M., Schefft B.  
*Dept of Psychology, Univ of Cincinnati, Cincinnati, OH; Dept of Neurology, Univ Hospital, Cincinnati, OH*

Th-am-38 51 SIGNIFICANT HYPOSMIA IN CYSTIC FIBROSIS
Henriksson G., Hallberg A., Stjärne P., Hjelte L.  
*ENT-Department, Karolinska Institute, Stockholm, Sweden;  
Department of Paediatrics, Karolinska Institute, Stockholm, Sweden*

Th-am-39 52 CHEMOSENSORY PERCEPTION IN ELDERLY LUNG CANCER PATIENTS ON CHEMOTHERAPY
Schiffman S., Zervakis J., Cappagiana L., Garst J.  
*Department of Psychiatry, Duke University, Durham, NC;  
Department of Medicine, Duke University, Durham, NC*

Th-am-40 53 SMELL LOSS IN NASAL-SINUS DISEASE
Cowart B., Pribitkin E., Klock C., Rosen D., Rosen M., Keane W.  
*Monell Chemical Senses Center, Philadelphia, PA;  
Otolaryngology-Head & Neck Surgery, Thomas Jefferson University, Philadelphia, PA*

Th-am-41 54 OLFACTORY AND NEUropsychological DEFICITS IN PATIENTS WITH ALCOHOL DEPENDence
Rupp C., Mair D., Kurz M., Hausmann A., Hinterhuber H.  
*Department of Psychiatry, University Clinics of Innsbruck, Innsbruck, Austria*
Cash Lunch Carts Available, 12:00 PM - 1:30 PM (Prefunction Area)

Minority and Clinical Travel Awardee Luncheon, 12:30 PM - 2:00 PM (Executive Board Room)

NIH Workshop: Funding Opportunities for New Investigators, 3:30 PM - 5:00 PM (Salons E & F)

Junior Investigator Cookout, 5:00 PM - 7:00 PM (Outdoors)

SLIDES

Thursday - 7:00 PM - 8:00 PM

Chemoreceptors: Genes and Proteins
Chairperson: Steven Munger

7:00  62  MOLECULAR EVOLUTION OF THE MOSQUITO ANOPHELES GAMBIAECHEMORECEPTOR GENE SUPERFAMILY
Robertson H.M. 1 1 Entomology, University of Illinois at Urbana-Champaign, Champaign, IL

7:15  63  IDENTIFICATION OF A HUMAN BITTER RECEPTOR
Bufo B. 1, Hofmann T. 1, Krautwurst D. 1, Meyerhof W. 1 1 Molekulare Genetik, German Institute of Human Nutrition, Potsdam-Rehbrücke, Germany; 1German Research Center of Food Chemistry, Garching, Germany

7:30  64  ODORANT RECEPTOR IDENTITY IMPARTS A SPECIFIC CODE TO AXONS OF OLFACTORY SENSORY NEURONS.
Feinstein P. 1, Hedbacker K. 1, Lee J. 1, Rodriguez I. 1, Vassalli A. 1, Mombaerts P. 1 1 Neurogenetics, The Rockefeller University, NYC, NY
7:45  65  DATA MINING, SEQUENCE ANALYSIS AND MOTIF DISCOVERY OF THE MOUSE Olfactory Receptors
Zhang X.,1 Liu A.H.,1 Califano A.,2 Stoilovitzky G.,2 Firestein S.3
1Biological Sciences, Columbia University, New York, NY;
2Computational Biology Center, T. J. Watson IBM Research, Yorktown Heights, NY

Evening Break 8:00 PM - 8:15 PM

SYMPOSIUM

Thursday - 8:15 PM - 10:30 PM

Stem Cells and the Chemical Senses: Analytic and Therapeutic Approaches
Chairperson: James E. Schwob

8:15  66  James E. Schwob
INTRODUCTION: STEM CELLS AND THE CHEMICAL SENSES: ANALYTIC AND THERAPEUTIC APPROACHES
Schwob J.E.;1 Anatomy & Cellular Biology, Tufts University, Boston, MA

8:20  67  Arlene Y. Chiu
NIH POLICY AND FUNDING OF STEM CELL RESEARCH
Chiu A.Y.;1 Repair and Plasticity Program, NINDS/NIH, Bethesda, MD

8:40  68  Mahendra S. Rao
STEM CELLS AND THE NERVOUS SYSTEM
Rao M.S.;1 Stem Cell Biology Unit, NIA/NIH, Baltimore, MD

9:10  69  Jeffrey D. Macklis
INDUCTION OF NEUROGENESIS IN THE NEOCORTEX OF ADULT MICE
Macklis J.D.;1 Neurology and Neuroscience, Harvard Medical School, Boston, MA

9:40  70  James E. Schwob
THE ANALYSIS OF PROGENITOR AND STEM CELL CAPACITY IN THE MAMMALIAN Olfactory Epithelium
Schwob J.E.;1 Anatomy & Cellular Biology, Tufts University School of Medicine, Boston, MA

10:10  DISCUSSION

This symposium was sponsored in part by the Taste and Smell Program, National Institute on Deafness and Other Communication Disorders

POSTERS

Thursday - 7:00 PM - 11:00 PM

Trigeminal System

Th-pm-1  71  INTERACTION OF BURN BETWEEN CAPSAICIN, PIPERINE, AND ZINGERONE
Affeltranger M.A.;1, Mcburney D.H.;1, Balaban C.D.;1 Psychology, University of Pittsburgh, Pittsburgh, PA; 2Otolaryngology and Neurobiology, University of Pittsburgh, Pittsburgh, PA

Th-pm-2  72  DESENSITIZATION OF ORAL IRRITATION BY MUSTARD OIL AND RECIPROCAL CROSS-DESENSITIZATION WITH CAPSAICIN
Carstens E.;1, Iodi Carstens M.;1, Simons C.T.;1 Neurobiology, Physiology and Behavior, University of California, Davis, Davis, CA; 2Food Science & Technology, University of California, Davis, Davis, CA

Th-pm-3  73  ASSESSMENT OF OCULAR AND NASAL IRRITATION IN ASTHMATICS RESULTING FROM FRAGRANCE EXPOSURE
Opiekun R.;1, Smeets M.;1, Rogers R.;2, Prasad N.;3, Vedula U.;3, Dalton P.;1 Monell Chemical Senses Center, Philadelphia, PA; 2Toxcon, Health Sciences Research Centre, Inc., Edmonton, Canada; 3University of Alberta, Edmonton, Canada; 4S.C. Johnson & Son, Racine, WI
Th-pm-4  74  SENSORY PERCEPTION OF PARTICULATE MATTER FROM MINERALS
Cain W.S., Jalowsky A.A., Kleinman M.T., Lee N.S., Lee B.R., Ahn B.H., Magruder K., Schmidt R., Culver B.D.
\{Surgery, University of California, San Diego, La Jolla, CA; \Community & Environmental Medicine, University of California, Irvine, Irvine, CA; \Medicine, University of California, Irvine, Irvine, CA\}

Th-pm-5  75  INDIVIDUAL DIFFERENCES IN NASAL LOCALIZATION FUNCTIONS FOR CARBON DIOXIDE
Wise P.M., Wysocki C.J. \{Monell Chemical Senses Center, Philadelphia, PA\}

Th-pm-6  76  DOES HABER'S LAW APPLY TO SENSORY IRRITATION?
Shusterma D.J., Matovicin E.C., Salmon A.G. \{Medicine, University of California, San Francisco, San Francisco, CA; \Office of Environmental Health Hazard Assessment, California Environmental Protection Agency, Oakland, CA\}

Th-pm-7  77  UNDERGROUND CABLE GNAWING REPELLENT EFFECTS WITH CAPSAICIN TREATMENTS IN NORTHERN POCKET GOPHERS (T. TALPOIDES) AND PLAINS POCKET GOPHERS (G. BURSIARIUS).
Shumake S.A. \{USDA/APHIS, National Wildlife Research Center, Fort Collins, CO\}

Th-pm-8  78  IN VIVO EFFECTS OF CAPSAZEPINE ON TRIGEMINAL NERVE SENSITIVITY TO CARBON DIOXIDE AND NICOTINE
Allmohammadi H., Silver W.L. \{Department of Biology, Wake Forest University, Winston-Salem, NC\}

Th-pm-9  79  ELECTROPHYSIOLOGICAL CHARACTERIZATION OF P2X-RECEPTORS IN CULTURED RAT TRIGEMINAL NEURONS
Paul J., Wetzel C.H., Hatt H. \{Cell Physiology, Ruhr-University Bochum, Bochum, Germany\}

Th-pm-10  80  SIMILARITIES BETWEEN CAPSAICIN- AND METHYL ANTHRANILATE-SENSITIVE CHICKEN TRIGEMINAL NEURONS
Kurnellas M.P., Kirifides M.L., Clark L., Bryant B.P.
\{Neuroscience, Monell Chemical Senses Center, Philadelphia, PA; \Repellents, National Wildlife Research Center, Fort Collins, CO\}

Conditioned Aversions

Th-pm-11  81  BEHAVIORAL EFFECTS OF STATIC MAGNETIC FIELDS ON FREELY MOVING AND RESTRAINED MICE
Lockwood D.R., Kwon B.S., Smith J.C., Houpt T.A.
\{Biological Sciences, Florida State University, Tallahassee, FL; \Psychology, Florida State University, Tallahassee, FL\}

Th-pm-12  82  CONDITIONED TASTE AVERSION INDUCED BY HIGH MAGNETIC FIELDS IN MALE AND FEMALE RATS DEPENDS ON POSITION WITHIN THE FIELD
Houp J.T., Reedell A.J., Golden G., Cassell J.A., Riccardi C., Smith J.C.
\{Biological Sciences, Florida State University, Tallahassee, FL; \Psychology, Florida State University, Tallahassee, FL\}

Th-pm-13  83  TASTE PRE-EXPOSURE ATTENUATES BOTH BEHAVIORAL AND NEURAL EXPRESSION OF A CONDITIONED TASTE AVERSION IN RATS.
Tiffany G.J., Kwon B.S., Barranco J.M., Lorch J.H., Houpt T.
\{Biological Science, Florida State University, Tallahassee, FL; \Psychology, Florida State University, Tallahassee, FL\}

Th-pm-14  84  BEHAVIORAL AND NEURAL EXPRESSION OF CONDITIONED CAPSAICIN AVersions
Lorch J.H., Kwon B.S., Barranco J.M., Tiffany G.J., Houpt T.A.
\{Biological Science, Florida State University, Tallahassee, FL\}

Th-pm-15  85  TASTE-POTENTIATED ODOR AVERSIONS: EFFECTS OF EXCITOTOXIC LESIONS OF THE AMYGDALE, VENTROPOSTEROMEDIAL THALAMIC NUCLEUS AND INSULAR CORTEX IN RATS
Inui T., Yamamoto T.
\{Division of Behavioral Physiology, Department of Behavioral Sciences, Graduate School of Human Sciences, Osaka University, Suita, Osaka, Japan\}

Tracking and Orientation

Th-pm-16  86  SENSORS AND MOBILE PLATFORM FOR ELECTRONIC OLFACtion
Gelpiern A., Dodabalapur A., Katz H.E., Lee D.D.
\{Biophysics, Monell Chemical Senses Center, Philadelphia, PA; \Electrical and Computer Engineering, University of Texas at Austin, Austin, TX; \Materials Research, Bell Laboratories, Murray Hill, NJ; \Electrical Engineering & Bioengineering, University of Pennsylvania, Philadelphia, PA\}
RESPONSES TO HOST ODOR BY THE LIMULUS WORM
Marti D.A.1, Atema J.1 1Boston University Marine Program,
Boston University, Woods Hole, MA

FERTILIZATION IN THE SEA: THE CHEMICAL IDENTI-
TY OF AN ABALONE SPERM ATTRACTANT
Krug P.1, Rifflle J.1, Zimmer R.K.1 1Biology, University of
California, Los Angeles, Los Angeles, CA

THE EFFECT OF ODOR PULSE FREQUENCY ON THE
ORIENTATION BEHAVIOR OF THE CRAYFISH,
ORCONECTES RUSTICUS.
Kozlowski C.P.1, Moore P.A.1 1Biological Sciences, Bowling
Green State University, Toledo, OH

UNILATERAL LESIONING OF CHEMORECEPTORS
DISTINGUISHES BETWEEN RHEOTAXIS AND
CHEMOTAXIS
Kraus-Epley K.E.1, Moore P.A.1 1Biological Sciences, Bowling
Green State University, Bowling Green, OH

ORIENTATION IN COMPLEX SENSORY LANDSCAPES:
SPATIAL ARRANGEMENT OF OdOR SOURCES MODIFIES
ORIENTATION STRATEGIES OF CRAYFISH.
Wolf M.C.1, Moore P.A.1 1Biological Sciences, Bowling Green
State University, Bowling Green, OH

AMERICAN LOBSTERS TRACK AND LOCATE DISTANT
"LEAKY" ODOR SOURCES
Voigt R.1, Basil J.1, Atema J.1 1Department of Biological Sciences,
Bowling Green State University, Bowling Green, OH;
1Department of Biology, Brooklyn College, Brooklyn, NY;
1Boston University Marine Program, Boston University, Woods Hole, MA

DIFFERENT POPULATIONS OF ANTENNULAR
CHEMSENSILLA CAN MEDIATE THE ORIENTATION OF
SPINY LOBSTERS
Horner A.J.1, Derby C.D.1 1Biology, Georgia State University,
Atlanta, GA

MODIFICATION OF THE SILKMOTH PHEROMONE-
SEARCHING BEHAVIOR BY VISUAL INFORMATION,
CIRCADIAN RHYTHMS AND SEROTONIN
Gatellier L.1, Hill E.S.1, Iwano M.1, Nagao T.2, Kanzaki R.1 1Inst.
Biol. Sci., Univ. of Tsukuba, Tsukuba, Ibaraki, Japan;
1Matto Lab. Human Inform. Syst., Kanazawa Inst. Tech., Kanazawa, Ishikawa,
Japan

AN EVALUATION OF FACTORS RELATED TO THE
DETERMINATION OF THE DIRECTION OF QUARRY
MOVEMENT BY EXPERIENCED TRACKING DOGS
Brisbin I.L.1, Walker D.B.3, Morrison W.H.3, Walker J.C.2
1Savannah River Ecology Laboratory, University of Georgia,
Aiken, SC; 2Sensory Research Institute, Florida State University,
Tallahassee, FL; 3Athens, GA

MEASURING CANINE OLFACTORY FUNCTION
NATURALISTICALLY
Pickel D.P.1, Walker D.B.3, Hoadley F.B.3, Taylor J.L.3, Walker
J.C.2 1Vonpickel, K-9 Inc., Tallahassee, FL; 2Sensory Research
Institute, Florida State University, Tallahassee, FL

Neural Coding in the Peripheral Olfactory System

MODELING OF HUMAN OLFACTORY ADAPTATION
Zhao K.1, Dalton P.3, Opieku R.1, Coleman D.1, Scherer P.W.1
1Bioengineering Dept., University of Pennsylvania, Philadelphia,
PA; 2Monell Chemical Senses Center, Philadelphia, PA

CONCENTRATION MODULATION OF SNIFFING IN
HUMANS REVEALS RAPID OLFACTORY PROCESSING
Johnson B.1, Mainland J.2, Sobel N.2 1Bioengineering, University
of California, Berkeley, CA; 2Neuroscience, University of
California, Berkeley, CA

DOSE-DEPENDENT RESPONSES OF MANDUCA SEXTA
"PHEROMONE-SPECIFIC" OLFACTORY NEURONS TO
GENERAL ODORANTS
Peterlin Z.A.1, Rogers M.E.1, Chesler A.T.1, Firestein S.J.1
1Biological Sciences, Columbia University, New York, NY

DISRUPTION OF GAP JUNCTIONS IN OLFACTORY
NEURONS ALTERS OLFACTORY RESPONSES TO SOME
ODORS
Zhang C.1, Restrepo D.1 1Department of Cellular and Structural
Biology, Neuroscience Program and the Rocky Mountain Smell
and Taste Center, University of Colorado Health Sciences Center,
Denver, CO

COMPLEX ELECTROPHYSIOLOGICAL RESPONSES OF
CATFISH OLFACTORY RECEPTOR NEURONS TO AMINO
ACID STIMULI
Valentic T.1, Koce A., Blejec A.1, Miklavec P.1 1Biology, Univ.
Ljubljana, Ljubljana, Slovenia; 2Nat. Ins. Biol., Univ. Ljubljana,
Ljubljana, Slovenia
Learning and Cognition

Th-pm-32 102 IN SITU CALCIUM IMAGING FOR SPATIAL ODOR MAPS IN THE MOUSE OLFACTORY EPITHELIUM Omura M., Sekine H., Shimizu T., Kataoka H., Touhara K. 1 Department of Integrated Biosciences, University of Tokyo, Kashiwa, Chiba, Japan; 2 Department of Biochemistry and Molecular Biology, Faculty of Medicine, University of Tokyo, Tokyo, Japan

Th-pm-33 103 COMBINATORIAL PHEROMONE CODING VISUALIZED IN THE MOUSE MAIN OLFACTORY EPITHELIUM Ziesmann J., Ma W., Novotny M.V., Zufall F., Leinders-Zufall T. 1 Anatomy & Neurobiology, University of Maryland, Baltimore, MD; 2 Institute for Pheromone Research and Department of Chemistry, Indiana University, Bloomington, IN

Th-pm-34 104 MAPPING OLFACTORY RESPONSES TO CO2 IN ADULT RATS Cecala A., Coates E., Scott J.W. 1 Neuroscience Program, Allegheny College, Meadville, PA; 2 Cell Biology, Emory University, Atlanta, GA

Th-pm-35 105 THE CONTRIBUTION EACH NOSTRIL MAKES TO OLFACTORY PERCEPTION De Puy K.S., Hornung D.E. 1 Biology Department, St. Lawrence University, Canton, NY

Th-pm-36 106 SPECIFIC EFFECT OF ODOR BUT NOT VISUAL IMAGERY ON DETECTION OF WEAK ODORS Djordjevic J., Boyle J., Zatorre R., Jones Gotman M. 1 Neuropsychology, Montreal Neurological Institute, Montreal, Canada


Th-pm-38 108 MECHANISMS OF OLFACTORY PERCEPTUAL LEARNING Fletcher M.L., Wilson D.A. 1 Zoology, University of Oklahoma, Norman, OK


Th-pm-40 110 SEX DIFFERENCES IN RECOLLECTIVE EXPERIENCE FOR OLFACTORY AND VERBAL INFORMATION Larsson M., Lövdén M., Nilsson L. 1 Dept of Psychology, Stockholm University, Stockholm, Sweden

Th-pm-41 111 EVIDENCE FOR LEFT:RIGHT DIFFERENCES IN ODOR DISCRIMINATION, BUT NOT IN SHORT-TERM ODOR MEMORY Doty R.L., Halm A.K. 1 Smell and Taste Center, University of Pennsylvania Smell and Taste Center, Philadelphia, PA

Th-pm-42 112 ATTENTION TO GUSTATORY AND OLFACTORY FLAVORS Ashkenazi A., Marks L.E. 1 Sensory Neuroscience Group, J. B. Pierce Laboratory, New Haven, CT


Th-pm-44 114 EFFECTS OF ODORANT ADMINISTRATION ON RATINGS OF PHYSICAL ATTRACTIVENESS AND PERSONALITY CHARACTERISTICS Corley N., Raudenbush B. 1 Psychology, Wheeling Jesuit University, Wheeling, WV

Th-pm-45 115 ALTERING THE EXPERIENCE OF CHEMESTHESIA: INSTRUCTIONAL MANIPULATIONS, ATTENTIONAL FOCUS AND PERCEIVED IRRITATION Maute C., Dalton P. 1 Monell Chemical Senses Center, Philadelphia, PA

Th-pm-46 116 MODULATION OF PAIN THRESHOLD, PAIN TOLERANCE, MOOD, WORKLOAD, AND ANXIETY THROUGH ODORANT ADMINISTRATION Raudenbush B., Meyer B., Flower N., Koon J. 1 Psychology, Wheeling Jesuit University, Wheeling, WV; Counseling, Appalachian State University, Boone, NC; 2 Adolescent Services, Northwood Health Systems, Pittsburgh, PA

Th-pm-47 117 EFFECTS OF MOTIVATION AND COMPETITIVENESS ON PAIN THRESHOLD AND RESPONSE Perkins J., Tornifolio B., Gillis K., Mccune A., Zambito K., Raudenbush B. 1 Psychology, Wheeling Jesuit University, Wheeling, WV

Th-pm-48 118 A TEST OF ASSOCIATIVE ODOR LEARNING Herz R.S., Beland S.L. 1 Psychology, Brown University, Providence, RI
Th-pm-49  119 MEMORY FOR INDIVIDUAL ODORS IN GOLDEN HAMSTERS: FUNCTIONAL NEUROANATOMY AND ROLE OF PROTEIN SYNTHESIS
Lai W.1, Chen A.1, Johnston R.E.1 1Psychology Dept., Cornell University, Ithaca, NY

Th-pm-50  120 MEMORY CONSOLIDATION IN THE ONE-TRIAL LEARNING OF NIPPLE-SEARCH ODORS IN RABBIT PUPS
Hudson R.J., Mendoza A.1, Couraud O.1 1Dept. Physiology, Inst. for Biomed. Res., Nacional University of Mexico, Mexico City, Mexico

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Friday, April 26, 2002

Continental Breakfast, 7:30 AM - 9:00 AM (Prefunction Area)

SLIDES

Friday - 8:00 AM - 9:45 AM

Chemosensory Processing in Humans
Chairperson: Valerie Duffy

8:00  121 FLAVOR AND TEXTURE PERCEPTION OF DAIRY PRODUCTS USING PROP CLASSIFICATION AND FREE-CHOICE PROFILING
Kirkmeyer S.V.1, Tepper B.J.1 1Flavors, Int'l Flavors & Fragrances, Inc., Dayton, NJ; 1Food Science, Rutgers, The State University of New Jersey, New Brunswick, NJ

8:15  122 POSTINGESTIVE EFFECTS OF ADDED GLUTAMATE ON LIKING FOR NOVEL FLAVORS
Prescott J.1 1Sensory Science Research Centre, University of Otago, Dunedin, New Zealand

8:30  123 EFFECTS OF CAPSAICIN TREATMENT ON TASTE PERCEPTION IN WOMEN
Massaro C.E.1, Formaker B.K.1, Frank M.E.1 1Oral Diagnosis, University of Connecticut Health Center, Farmington, CT

8:45  124 HORMONAL GATING OF EXPOSURE-INDUCED SENSITIVITY TO ODORS IN WOMEN
Dalton P.1, Gould M.1, Basic M.1, Breslin P.A.1 1Monell Chemical Senses Center, Philadelphia, PA

9:00  125 OLFATORY CODING OF PLEASANTNESS AND INTENSITY IN THE HUMAN AMYGDALOID COMPLEX
Sobel N.1, Khan R.1, Stappen L.1, Anderson A.1 1Neuroscience, University of California, Berkeley, CA

9:15  126 CEREBRAL PROCESSING OF BIMODAL ODORANTS
Berglund H.1, Heden-Bloomqvist E.1, Savic I.1 1Medicine, Karolinska Institute, Stockholm, Sweden; 2ENT, Karolinska Institute, Stockholm, Sweden; 3Neuroscience, Karolinska Institute, Stockholm, Sweden
9:30 Olfactory Impairment in a Population at Risk for Dementia
Murphy C.¹, Schubert C.², Cruickshanks K.J.² ¹Psychology, San Diego State University, San Diego, CA; ²Ophthalmology and Visual Sciences, University of Wisconsin-Madison Medical School, Madison, WI

Mid morning coffee available 9:30 AM - 10:00 AM

Symposium

Friday - 10:00 AM - 12:15 PM

Behavioral Analysis of Chemosensory Function
Chairperson: John I. Glendinning

10:00 John I. Glendinning
Introduction: Behavioral Analysis of Chemosensory Function
Glendinning J.I. ¹Barnard College, Columbia University, New York, NY

10:05 Robert J. Doeling
Avian Psychoacoustics
Doeling R.J. ¹Psychology, University of Maryland College Park, College Park, MD

10:30 Brian H. Smith
Evolution in Parallel: What Behavioral Studies of Insects Tell Us About Olfactory Codes in General
Smith B.H. ¹Entomology, Ohio State University, Columbus, OH

10:55 Matthias Laska
What Genes, Second Messengers, and Ion Channels Cannot Tell Us...or: Why Behavioral Analysis of Olfactory Function Is More Important Than Ever
Laska M. ¹Dep. of Medical Psychology, University of Munich, Munich, Germany

11:20 John I. Glendinning
What Is the Best Strategy for Assessing Taste-Mediated Ingestive Responses in Mice?
Glendinning J.I. ¹Department of Biological Sciences, Barnard College, Columbia University, New York, NY

11:45 Discussion
Burton Slotnick (Discussant)
Department of Psychology, American University
Steven J. St. John (Discussant)
Department of Psychology, Reed College

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

Posters

Friday - 8:00 AM - 12:00 PM

Chemosensation in Children

Fr-am-1 Swedish Smell Identification Test for Children (SSIT-C)
Hallberg A.¹, Stjärne P.¹, Larsson M.² ¹Department of Clinical Science, Division of Otorhinolaryngology, Stockholm, Sweden; ²Department of Psychology, Psychology, Stockholm, Sweden

Fr-am-2 Assessment of Olfactory Function in Children Using the Sniff Magnitude Test
Niergarth K.A.¹, Duly M.F.², Gesteland R.C.³, Frank R.A.² ¹Emerging Concepts, Inc., Cin, OH; ²Dept of Psychology, Univ of Cincinnati, Cin, OH; ³Dep of Cell Biology, Univ of Cincinnati, Cin, OH

Fr-am-3 Bitter Taste Modification by Sodium Salts in Pediatric Populations and Adults
Pepino M.Y.¹, McFarlane N.², Teel T.¹, Breslin P.A.¹, Beauchamp G.K.³, Mennella J.A.¹ ¹Monell Chemical Senses Center, Philadelphia, PA

Fr-am-4 Taste Pore Density on the Tongue and Prop Sensitivity in Children
Hutchinson J.¹, Shahbake M.¹, Laing D.G.¹, Jinks A.L.¹ ¹Centre for Advanced Food Research, University of Western Sydney, Penrith, NSW, Australia
Neurogenesis and Proliferation

Fr-am-9  141 STRUCTURAL AND FUNCTIONAL MEASURES OF MATURATION IN CULTURED HUMAN OLFACTORY NEURONS
Gomez G., Rawson N.  Monell Chemical Senses Center, Philadelphia, PA

Fr-am-10  142 NT-3 INCREASES THE SURVIVAL OF MATURE ORNS AND REDUCES THE PROLIFERATION AND MATURATION OF IMMATURE NEURONS
Wang E., Simpson P.J., Moon C., Samanta-Roy D., Ronnett G.V.  Neuroscience (SOM), Johns Hopkins University, Baltimore, MD

Fr-am-11  143 SPATIALLY DYNAMIC EXPRESSION OF MECP2 IN RODENTS
Cohen D., Matarazzo V., Palmer A., Khokhar B., Ronnett G.V.  Neuroscience, Johns Hopkins University, Baltimore, MD

Fr-am-12  144 EXPRESSION OF DLX 1 AND 2 IN THE NEONATAL AND ADULT MOUSE OLFACTORY SYSTEM.

Olfactory Pathway Anatomy

Fr-am-18  150 CHARACTERIZATION OF OUTPUT CELLS IN THE ZEBRAFISH OLFATORY BULB.
Yettaw H.K., Byrd C.A.  Biological Sciences, Western Michigan University, Kalamazoo, MI

Fr-am-19  151 IMMUNOHISTOCHEMICAL LOCALIZATION OF A TAURINE-SYNTHESIZING ENZYME IN THE RAT OLFACTORY BULB
Kratskin L., Belluzzi O.  Smell and Taste Center, University of Pennsylvania, Philadelphia, PA; Department of Biomedical Sciences, University of Ferrara, Ferrara, Italy

Fr-am-20  152 OLFACITION AND CONNECTIONS BETWEEN THE EPITHELIUM AND OLFACTORY BULB IN 3-METHYL INDOLE-TREATED MICE
Zaiens K., Slotnick B.  Psychology, American University, Washington, DC
Fr-am-21 153 THE MUSHROOM BODIES OF THE SCARAB BEETLE PACHNODA MARGINATA 
Larsson M.C., Hansson B.S., Strausfeld N.J. 1 ARL Division of Neurobiology, University of Arizona, Tucson, AZ; 2 Dept. of Crop Science, Swedish University of Agricultural Sciences, Alnarp, Sweden; 3 ARL Division of Neurobiology, University of Arizona, AZ

Fr-am-22 154 SELECTIVE RESPONSE TO CHEMOSENSORY STIMULI IN MEDIAL AMYGDALA 
Westberry J.M., Meredith M. 1 Neuroscience, Florida State University, Tallahassee, FL

Fr-am-23 155 EVIDENCE FOR SEGREGATION OF FUNCTION WITHIN THE HAMSTER AOB 
Bath K.G., Johnston R.E. 1 Psychology, Cornell University, Ithaca, NY

Olfactory Transduction

Fr-am-24 156 G-PROTEIN COUPLED RECEPTORS IN THE OLFATORY SYSTEM: A STRONGLY CONSERVED MECHANISM OF SIGNAL TRANSDUCTION 
Frontini A., Zielinski B., Li W., Dakhil C., Yun S. 1 Biological Sciences, University of Windsor, Windsor, Ont, Canada; 2 Fisheries and Wildlife, Michigan State University, East Lansing, MI

Fr-am-25 157 BEX-OMP INTERACTION 
Koo J., Behrens M., Margolis J.W., Margolis F.L. 1 Dept. of Anat. & Neurobiol., UMB, Baltimore, MD; 2 Dept. of Molecular Genetics, Deutsches Institut fuer Ernahrungsforshung, Potsdam-Rehbruecke, Germany

Fr-am-26 158 CLONING GUANYLYL CYCLASE ACTIVATING PROTEINS FROM THE OLFATORY SYSTEM OF MANDUCA SEXTA 
Collmann C., Nighorn A. 1 ARLDN, University of Arizona, Tucson, AZ

Fr-am-27 159 CHARACTERIZATION OF A DISTINCT CHEMOSENSORY SUBSYSTEM IN THE MAMMALIAN NOSE 
Cockerham R.E., Garbers D.L., Reed R.R., Munger S.D. 1 Dept. of Anatomy and Neurobiology, University of Maryland at Baltimore, Baltimore, MD; 2 Pharmacology, University of Texas Southwestern Medical Center, Dallas, TX; 3 Molecular Biology and Genetics, Johns Hopkins University, Baltimore, MD

Gustatory Nerves

Fr-am-28 160 TRANSGENIC ANALYSIS OF THE MOUSE GUANYLYL CYCLASE-D PROMOTER 
Wu K., Fulle H.J. 1 Dept. of Cell & Neurobiology, University of Southern California Keck School of Medicine, Los Angeles, CA

Fr-am-29 161 REGULATION OF CYCLIC AMP IN THE CILIARY CYTOPLASM OF THE OLFATORY RECEPTOR CELL 
Takeuchi H., Kurahashi T. 1 Department of Biophysical Engineering Graduate School of Engineering Science, Osaka University, Osaka, Japan

Fr-am-30 162 CAMP-INDEPENDENT AND CAMP-DEPENDENT RESPONSES OF OLFATORY NEURONS IN XENOPUS LAEVIS TADPOLES 
Roessler W., Manzini L., Peters F., Schild D. 1 Physiologisches Institut, University of Boeotingen, Boetingen, Germany

Fr-am-31 163 EFFECTS OF CYCLIC NUCLEOTIDES AND BIOGENIC AMINES ON OLFATORY SENSILLA OF THE HAWKMOTh MANDUCA SEXTA 
Dolzer J., Flecke C., Stengl M. 1 Biology, Philipps-University of Marburg, Marburg, Germany

Fr-am-32 164 THE RELATIONSHIP BETWEEN THE ELECTRONIC / STRUCTURAL PROPERTIES AND THE ODOR ACTIVITIES OF PYRAZINE DERIVATIVES 
Inoue T., Shimazaki K., Shikata H., Sakakibara K. 1 Tobacco Science Research Center, Japan Tobacco Inc., Yokohama, Kanagawa, Japan; 2 Applied Chemistry, Yokohama National Univ., Yokohama, Kanagawa, Japan

Fr-am-33 165 DISTRIBUTION OF NERVE FIBERS IN THE SEA CATFISH PLOTOSUS LINEATUS BARBEL 
Sakata Y., Tsukahara J., Kiyohara S. 1 Physiology, Univ. Utah SOM, Salt Lake City, UT; 2 Chemistry and BioScience, Fac. Science, Kagoshima Univ., Kagoshima, Japan

Fr-am-34 166 DEGENERATION OF TASTE BUDS IN MOUSE FUNGIFORM PAPILLA AFTER CHORDA-LINGUAL NERVE TRANSECTION 
Guagliardo N.A., Hill D.L. 1 Psychology, University of Virginia, Charlottesville, VA
Fr-am-35  167  SEMIQUANTITATIVE ANALYSIS OF ALTERATIONS IN INTRAGEMMEL NERVE FIBERS IN IRRADIATED TASTE BUDS LABELED WITH GAP/B50 OR SYNAPTIC VESICLE PROTEINS
Nelson G.M., Byars K.E. 1 Pathology, University of Alabama at Birmingham, Birmingham, AL

Fr-am-36  168  SIMULTANEOUS CHRONIC RECORDING FROM MULTIPLE SINGLE FIBERS OF THE CHORDA TYMPANI NERVE USING AN IMPLANTABLE SIEVE ELECTRODE ARRAY
Shimatani Y., Nikles S.A., Najafi K., Bradley R.M. 1 Biologic & Materials Science, University of Michigan, Ann Arbor, MI; Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, MI

Fr-am-37  169  COMPARISON OF THE RESPONSES OF THE CHORDA TYMPANI AND GLOSSOPHARYNGEAL NERVES TO TASTE STIMULI IN C57BL/6 MICE
Danilova V., Hellekant G. 1 Animal Health and Biomedical Sciences, University of Wisconsin-Madison, Madison, WI

Fr-am-38  170  ELECTROGUSTOMETRIC THRESHOLDs: RELATIONSHIP TO ANTERIOR TONGUE LOCUS, AREA OF STIMULATION, AND NUMBER OF FUNGIFORM PAPILAE
Miller S.L., Mirza N., Doty R.L. 1 School of Dental Medicine, Univ of Pennsylvania, Philadelphia, PA; Otorehinolaryngology: Head and Neck Surgery, Univ of Pennsylvania, Philadelphia, PA; Smell and Taste Center, Univ of Pennsylvania, Philadelphia, PA

Fr-am-39  171  ORAL PHANTOMS: EVIDENCE FOR CENTRAL INHIBITION PRODUCED BY TASTE
Bartoshuk L.M., Chapo A., Duffy V.B., Grushka M., Norgren R., Kveton J.F., Pritchard T.C., Snyder D.J. 1 Surgery, Yale University, New Haven, CT; Dietetics Program, University of Connecticut, Storrs, CT; Behavioral Science, Pennsylvania State University, Hershey, PA; Neurosciences and Anatomy, Pennsylvania State University, Hershey, PA

Cash Lunch Carts Available, 12:00 PM - 1:30 PM (Prefunction Area)

Business Meeting, 12:15 PM - 2:00 PM (Salons E & F)

Taste vs. Smell Softball Game, 2:00 PM - 4:00 PM (Fruitville Road Park)

Industrial Reception, 5:00 PM - 7:00 PM (Salons C & D)

SLIDES

Friday - 7:00 PM - 8:00 PM

Responses to Biologically Relevant Odors
Chairperson: Trese Leinders-Zufall

7:00  172  PHEROMONAL SIGNALS IN A TANGERINE-SCENTED SEABIRD
Hagelin J.C., Jones I.L., Rasmussen L.E. 1 Department of Ecology and Evolutionary Biology, University of Connecticut, Storrs, CT; Department of Biology, Memorial University of Newfoundland, St. John's, NF, Canada; Department of Biochemistry & Molecular Biology, Oregon Graduate Institute, Beaverton, OR

7:15  173  UNUSUAL PHEROMONE RECEPTOR NEURON RESPONSES IN HELIOTHINE MOTH ANTENNAE DERIVED FROM INTER-SPECIES IMAGINAL DISC TRANSPLANTATION
Ochieng S.A., Poole K., Roeofls W.L., Linn C., Baker T.C. 1 Entomology, Iowa State University, Ames, IA; NYSAES, Cornell University, Geneva, NY; Entomology, NYSAES, Geneva, NY

7:30  174  SEX DIFFERENCES IN Olfactory CROSS-ADAPTATION OF HUMAN SWEAT ODOR
7:45 175 EFFECTS OF BREASTFEEDING CHEMOSIGNALS ON HUMAN SEXUAL MOTIVATION.
Spencer N.A., Jacob S., Sellergren S.A., Bullivant S.B,,
Mennella J.A., McClintock M.K. 1 Institute for Mind and Biology,
University of Chicago, Chicago, IL; 2 Monell Chemical Senses
Center, Philadelphia, PA

Evening Break 8:00 PM - 8:15 PM

SYMPOSIUM

Friday - 8:15 PM - 10:30 PM

The Presidential Symposium: The Chemicals of the Chemical Senses
Chairperson: Stuart Firestein

8:15 176 Stuart J. Firestein
INTRODUCTION: THE CHEMICALS OF THE CHEMICAL SENSES
Firestein S. 1 Columbia University, New York, NY

8:20 177 Peter Atkins
MAKING MOLECULES MATTER
Atkins P. 1 Lincoln College, University of Oxford, Oxford, UK

8:45 178 Daniel H. Rogers
USE OF HIGH THROUGHPUT DISCOVERY TECHNIQUES TO CREATE NOVEL FLAVOR AND FRAGRANCE MOLECULES
Rogers D.H. 1 Associate Director, Synthetic Chemistry, Synomyx,
La Jolla, CA

9:10 179 Nigel G. J. Richards
COMPUTATIONAL METHODS IN STRUCTURE-BASED ODORANT DISCOVERY
Richards N.G. 1 Department of Chemistry, University of Florida,
Gainesville, FL

9:35 180 Charles Sell
DESIGNING FRAGRANCE INGREDIENTS
Sell C. 1 Quest International, Ashford, Kent, England

9:55 181 Clint D. Brooks
MOLECULAR PERFORMANCE AND PERCEPTION INFORMATICS
Brooks C.D. 1 VP Research and Development, International Flavors and Fragrances, Union Beach, NJ

10:15 DISCUSSION

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

POSTERS

Friday - 7:00 PM - 11:00 PM

Neural Plasticity and Regeneration

Fr-pm-1 182 PLASTICITY UNDERLYING ANDROSTENONE LEARNING MAY BE MEDIATED CENTRALLY RATHER THAN PERIPHERALLY
Mainland J.D. 1, Brenner E.A. 2, Young N. 1, Johnson B.N. 3, Sobel N. 1 Neuroscience, University of California, Berkeley, Berkeley, CA; 2 Psychology, University of California, Berkeley, Berkeley, CA; 3 Bioengineering, University of California, Berkeley, Berkeley, CA

Fr-pm-2 183 ODOR STIMULATION MODULATES APOPTOSIS IN ADULT OLFACTORY (PIRIFORM) CORTEX OF THE RAT
Leung C.H. 1, Wilson D.A. 1 Department of Zoology, University of Oklahoma, Norman, OK

Fr-pm-3 184 ABLATION OF BULB NEURONS KILLS PIRIFORM NEURONS BUT NOT SENSORY NEURONS
Guthrie K. 1, Gull C. 2 Biomedical Sciences, Florida Atlantic Univ., Boca Raton, FL; 2 Anatomy and Neurobiology, Univ. of California, Irvine, CA

Fr-pm-4 185 AXOTOMY VS. BULBECTOMY: TEMPORAL ANALYSIS OF APOPTOSIS
Shinners M.J. 1, Robinson A.M. 1, Conley D.B. 1, Kern R.C. 1 Otolaryngology, Northwestern University, Chicago, IL

Fr-pm-5 186 APOPTOSIS OF OLFACTORY RECEPTOR NEURONS INDUCED BY INFECTION AND OLFACTORY NERVE TRANSSECTION IN RAT
Ge Y. 1, Tsukatani T. 2, Miwa T. 1 ENT, Beijing University, Beijing, China; 2 ENT, Kanazawa University Hospital, Kanazawa, Japan
Fr-pm-6 187 DOES ESTROGEN PROTECT Olfactory Neurons FROM APOPTOSIS?
Pitovski D.Z. 1 2 1 Smell and Taste Center, Dept of Otolaryngology, Wake Forest University, Winston-Salem, NC

Fr-pm-7 188 GLUTAMATE RECEPTOR DISTRIBUTION IN THE Olfactory Bulb Is ALTERED FOLLOWING NARIS OCCLUSION
Hamilton K.A. 1 Coppola D. 2 1 Cellular Biology and Anatomy, Louisiana State University Health Sciences Center, Shreveport, LA; 2 Neuroscience Program, Centenary College, Shreveport, LA

Fr-pm-8 189 DEVELOPMENTAL ACTIVATION OF EXTRACELLULAR SIGNAL-RELATED KINASE (ERK1/2) IN Olfactory Bulb Granule Cells Is ALTERED BY NARIS OCCLUSION
Mirich J.M. 1 Brunjes P.C. 1 1 Psychology, University of Virginia, Charlottesville, VA

Fr-pm-9 190 MASH1 AND NEURO EXPRESSION IN METHYL BROMIDE-LESIONED ADULT RAT OLFACTORY EPITHELIUM.
Mangalapras G.L. 1 Youngentob S.L. 1 Schwob J.E. 2 1 Dept. of Neuroscience and Physiology, SUNY Upstate Medical University, Syracuse, NY; 2 Dept. Anatomy and Cell Biology, Tufts University, School of Medicine, Boston, MA

Fr-pm-10 191 NOGO & NOGO RECEPTOR EXPRESSION IN THE MAMMALIAN Olfactory SYSTEM
Iwema C.L. 1 Bartolomei J.C. 1 Strittmatter S.M. 1 Greer C.A. 1 1 Neurosurgery, Yale University School of Medicine, New Haven, CT; 2 Neurology, Yale University School of Medicine, New Haven, CT

Fr-pm-11 192 IMMUNOSTAINING OF APOPIPROTEIN E IN MURINE MUCOSA
Kleene N.K. 1 Pixley S.K. 1 1 Cell Biology, Neurobiology & Anatomy, University of Cincinnati, Cincinnati, OH

Fr-pm-12 193 CHEMOKINE-MEDIATED INFLTRATION OF MACROPHAGES INTO THE Olfactory EPITHELIUM FOLLOWING TARGET ABALATION
Getchell T.V. 1 Subbedar N. 1 Shah D.S. 1 Hackley G. 1 Partin J.V. 1 Sen G. 1 Getchell M.L. 1 1 Sanders Brown Ctr. on Aging, U. of Kentucky, Lexington, KY

Fr-pm-13 194 INFLAMMATORY CELLS IN THE NORMAL AND DENERVATED LINGUAL EPITHELIUM
Mcluskey L.P. 1 2 1 Physiology, Medical College of Georgia, Augusta, GA; 2 Psychology, University of Virginia, Charlottesville, VA

Fr-pm-14 195 TIME-COURSE OF TASTE BUD REGENERATION AFTER TRANSECTION OF THE GLOSSOPHARYNGEAL AND GREATER SUPERFICIAL PETROSAL NERVES IN THE RAT
St. John S.J. 1 Garcea M. 1 Spector A.C. 1 1 Department of Psychology, Reed College, Portland, OR; 2 Department of Psychology, University of Florida, Gainesville, FL

Fr-pm-15 196 RECOVERY OF SALT TASTE RESPONSES AFTER CRUSH OF THE CHORDA TYPANI NERVE IN MICE.
Yasumatsu K. 1 Katsukawa H. 1 Sadamitsu C. 1 Shigemura N. 1, Ninomiya Y. 1 1 Oral Neuroscience, Kyushu University, Fukuoka, Japan; 2 Physiology, Asahi University, Gifu, Japan

Development of the Gustatory System

Fr-pm-16 197 DEVELOPMENTAL TASTE RECEPTOR CELL KINETICS
Hendricks S.J. 1 Brunjes P.C. 1 Hill D.L. 1 1 Psychology, University of Virginia, Charlottesville, VA

Fr-pm-17 198 SHH PROTEIN IN EMBRYONIC RAT TONGUE AND TONGUE CULTURES
Liu H. 1 Macallem D.K. 1 Gaffield W. 1 Mistretta C.M. 1 1 School of Dentistry, University of Michigan, Ann Arbor, MI; 2 Medical School, University of Michigan, Ann Arbor, MI; 3 Regional Research Center, USDA, Albany, CA

Fr-pm-18 199 SEMA3A REPELS LATE EMBRYONIC STAGE SENSORY AXONS THAT PENETRATE SEMA3A MRNA-RICH LINGUAL EPITHELIUM.
Dillon T.E. 1 Rochlin M.W. 1 1 Biology, Loyola University (Chicago), Chicago, IL

Fr-pm-19 200 RETINOIC ACID ACTS DIRECTLY TO RESPECIFY OPHARYNGEAL EPITHELIUM.
Rougas S. 1 Parker M.A. 1 Barlow L.A. 1 1 Department of Biological Sciences, University of Denver, Denver, CO; 2 Department of Cell and Structural Biology, University of Colorado Health Sciences Center, Denver, CO
Bitter Taste

Fr-pm-20 201 DIFFERENTIAL EFFECTS OF GUSTATORY NERVE TRANSECTION ON QUININE-STIMULATED FOS-LIKE IMMUNOREACTIVITY IN THE PARABRACHIAL NUCLEUS OF THE RAT
King C.T.1, Dodson S.E.1, Galvin K.E.1, Garcia M.3, Spector A.C.3
1Department of Psychology, Stetson University, DeLand, FL;
2Department of Biology, Stetson University, DeLand, FL;
3Department of Psychology, University of Florida, Gainesville, FL

Fr-pm-21 202 DENATONIUM, PROPYLTHIOURACIL AND QUININE ELICIT SIMILAR PATTERNS OF FOS-LIKE IMMUNOREACTIVITY IN THE RAT NUCLEUS OF THE SOLITARY TRACT
Chan C.Y.1, Yoo J.E.2, Travers S.P.3 1Neurosciences Graduate Study Program, Ohio State University, Columbus, OH; 2Oral Biology, Ohio State University, Columbus, OH

Fr-pm-22 203 SIGNAL TRANSDUCTION PATHWAYS IN BITTER TASTE DETECTION
Richer T.A.1, Caipeco A.1, Margolseke R.F.2, Roper S.D.3
1Physiology and Biophysics, University of Miami, Miami, FL;
2Physiology and Biophysics, Mount Sinai School of Medicine, NY

Fr-pm-23 204 PHYSIOLOGICAL EXPLORATION OF BITTER AND SWEET RECEPTORS IN RAT TASTE RECEPTOR CELLS.
Zhao F.1, Lu S.1, Herness M.S.1 1Oral Biology, Ohio State University, Columbus, OH

Fr-pm-24 205 SOA & CAFFEINE FORM NON-NORMAL TASTE DISTRIBUTIONS UNRELATED TO PROP/PTC
Breslin P.A.1, Coughlin C.D.2, Reed D.R.3 1Sensory, Monell Chemical Senses Center, Philadelphia, PA; 2Genetics, Monell Chemical Senses Center, Philadelphia, PA

Fr-pm-25 206 TASTE INTERACTIONS AMONG BINARY MIXTURES OF BITTER COMPOUNDS
Bournazell M.M.1, Keast R.S.2, Breslin P.A.3 1Taste, Firmenich SA, Geneva, Switzerland; 2Taste, Monell Chemical Senses Center, Philadelphia, PA

Fr-pm-26 207 CAPSAICIN AS A GUSTATORY STIMULUS
Green B.1, Schullery M.1 1Sensory Neuroscience Group, John B. Pierce Laboratory, New Haven, CT

Response Properties of Central Olfactory Neurons

Fr-pm-27 208 DYNAMIC GATING OF SPIKE PROPAGATION IN THE MITRAL CELL SECONDARY DENDRITES FOR INTERACTIONS WITH DIFFERENT COMBINATION OF OLFACTORY GLOMERULI
Xiong W.1, Chen W.R.3 1Neurobiology, Yale University, New Haven, CT

Fr-pm-28 209 ODORANT INDUCED EXPRESSION OF ARC MRNA IN MOUSE MOB PERIGLOMERULAR CELLS
Marchand J.E.1, Yang X.2 1Anesthesia, Tufts University, Boston, MA

Fr-pm-29 210 ADAPTOR PROTEINS MODULATE PROTEIN-PROTEIN INTERACTIONS AND BIOPHYSICAL PROPERTIES OF AN OLFACTORY BULB K+ CHANNEL
Cook K.K.1, Tucker K.R.1, Fadool D.A.1 1Prog. in Neurosci. & Mol. Biophysics, Florida State University, Tallahassee, FL

Fr-pm-30 211 GLOMERULAR, BEHAVIORAL AND BIOPHYSICAL CHANGES IN THE OLFACTORY BULB OF KV1.3 KNOCK-OUT MICE.
Fadool D.A.1, Colley B.S.1, Otten D.1, Kaczmarek L.K.1 1Prog. in Neurosci. & Mol. Biophysics, Florida State University, Tallahassee, FL; 2Cell & Mol. Physiol, Yale University School of Medicine, New Haven, CT

Fr-pm-31 212 RESPONSES OF OLFACTORY BULB UNITS IN THE CHANNEL CATFISH TO AMINO ACID ISOMERS
Nikonov A.A.1, Caprio J.1 1Biological Sciences, LSU, Baton Rouge, LA

Fr-pm-32 213 MORPHOLOGICAL AND PHYSIOLOGICAL CHARACTERISTICS DISTINGUISH FOUR CLASSES OF JUXTAGLOMERULAR NEURONS IN THE MAIN OLFACTORY BULB
Karnup S.V.1, Hayar A.M.1, Ennis M.1, Shipley M.T.1 1Anatomy & Neurobiology, Program in Neuroscience, University of Maryland at Baltimore, Baltimore, MD

Fr-pm-33 214 ULTRA-LONG-LASTING DEPOLARIZATIONS IN RESPONSE TO OLFACTORY NERVE INPUT IN DEVELOPING MITRAL CELLS.
Fucik A.C.1, Heyward P.M.1, Shipley M.T.1 1Anatomy and Neurobiology, Program in Neuroscience, University of Maryland at Baltimore, Baltimore, MD
**Stimulus Interactions**

**Fr-pm-38  219  FLAVOR EFFECTS ON PERCEIVED TEXTURE AND FOOD INTAKE**
Dewijk R.A. 1, Prinz J.F. 1, Engelen L. 1, Weenen H. 3 1Wageningen Centre for Food Sciences, Wageningen, Netherlands

**Fr-pm-39  220  BITTERNESS AND ASSOCIATED ORAL SENSATIONS IN CHLORHEXIDINE/ETHANOL RINSES**
Portmann M. 1, Mcconville P. 1, Alexander S. 1, Breslin P. 3, Beauchamp G. 3, Tharp C.D. 1 1NPD, GlaxoSmithKline Consumer Healthcare, Weybridge, Surrey, United Kingdom; 1S&P, Monell Chemical Senses Center, Philadelphia, PA

**Fr-pm-40  221  EFFECTS OF CHLORHEXIDINE ON THE TASTE OF CHLORIDE SALTS**
Kolesar M.R. 1, Gent J.F. 1, Frank M.E. 1 1Oral Diagnosis, University of Connecticut Health Center, Farmington, CT

**Fr-pm-41  222  GUSTATORY-IRRITANT INTERACTIONS: SUPPRESSION OF TASTE BY ORAL CAPSAICIN**
Boucher Y.M. 1, Simons C.T. 1, Carstens E. 1 1Section of Neurobiology, Physiology & Behavior, Univ. of California, Davis, Davis, CA; 2Food Science & Technology, Univ. of California, Davis, Davis, CA; 3Neurobiology, Physiology and Behavior, University of California, Davis, Davis, CA

**Fr-pm-42  223  NICOTINE SUPPRESSION OF TASTANT-EVOKED NEURAL ACTIVITY IN THE RAT**
Simons C.T. 1, Boucher Y.M. 1, Carstens E. 1 1Food Science & Technology, Univ. of California, Davis, Davis, CA; 2Neurobiology, Physiology and Behavior, University of California, Davis, Davis, CA

**Fr-pm-43  224  SUCROSE-DENATONIUM AND DULCIN-QUININE ANTAGONISM IN NEURAL RESPONSES TO TASTE MIXTURES**
Formaker B.K. 1, Hettinger T.P. 1, Frank M.E. 1 1Oral Diagnosis, University of Connecticut Health Center, Farmington, CT

**Fr-pm-44  225  ROLE OF PRIOR ASSOCIATIONS IN THE SUB-THRESHOLD INTEGRATION OF TASTES AND ODORS**
Belanger M.A. 1, Tharp C.D. 1, Breslin P.A. 1, Dalton P. 1 1Monell Chemical Senses Center, Philadelphia, PA

**Fr-pm-45  226  ANALYSIS OF MULTICOMPONENT ODOR MIXTURES BY HONEYBEES**
Wright G.A. 1, Smith B.H. 1 1Entomology, Ohio State University, Columbus, OH

**Fr-pm-46  227  ASYMMETRIC INTERACTIONS BETWEEN HETEROGENEOUS RETRONASAL AND ORTHONASAL ODORANT PAIRS**
Halpern B.P. 1, Sun B.C. 1Psychology and Neurobiology and Behavior, Cornell University, Ithaca, NY
Continental Breakfast, 7:30 AM - 9:00 AM (Prefunction Area)

SLIDES

Saturday - 8:00 AM - 9:45 AM

Neural Coding and Circuits
Chairperson: John Scott

8:00   228  SPECIFICITY OF SUCROSE-BEST FIBERS IN RHESUS MONKEY CHORDA TYMPANI DOES NOT DEPEND ON STIMULUS CONCENTRATION
       Danilov Y.1, Danilova V.1, Hellevant G.1 1Animal Health and Biomedical Sciences, University of Wisconsin-Madison, Madison, WI

8:15   229  ROLE OF AMINO ACID NEUROTRANSMITTERS IN TASTE-MOTOR PROCESSING
       Travers J.B.1, Travers S.P.1, Chen Z.1 1Otal Biology, Ohio State University, Columbus, OH

8:30   230  HIGHLY SPECIFIC OLFACTORY RECEPTOR NEURONS SPECIFIC TO NATURALLY PRODUCED ODOR LIGANDS IN DROSOPHILA MELANOGASTER
       Hansson B.S.1, Stensmyr M.C.1, Giordano E.2, Angjioy A.M.2 1Dept of Crop Science, Chemical Ecology, Swedish University of Agricultural Sciences, Alnarp, Sweden; 2Department of Experimental Biology, University of Cagliari, Monserrato, Italy

8:45   231  PARALLEL MAPPING OF MULTIPLE STIMULUS FEATURES USING MULTICHANNEL RECORDING ARRAYS IN THE MOTH ANTENNAL LOBE
       Christensen T.A.1, Lei H.1, Hildebrand J.G.1 1Arizona Research Labs Div of Neurobiology, University of Arizona, Tucson, AZ
9:00 232 RHYTHMIC BURSTING AND SYNAPTIC INTERACTIONS AMONG JUXTAGLOMERULAR (JG) NEURONS MAY TRANSFORM OLFATORY NERVE (ON) INPUTS INTO SYNCHRONOUS ALL-OR-NONE GLOMERULAR OUTPUT. Hayar A.M.\(^1\), Karnup S.V.\(^1\), Shipley M.T.\(^1\), Ennis M.\(^1\) \(^1\)Dept. of Anatomy & Neurobiology, University of Maryland at Baltimore, Baltimore, MD

9:15 233 SYNTHETIC CODING OF ODORANT MIXTURES IN RAT PIRIFORM CORTEX. Wilson D.A.\(^1\) \(^1\)Department of Zoology, University of Oklahoma, Norman, OK

9:30 234 LANDMINE DETECTION USING AN ARTIFICIAL OLFATORY SYSTEM White J.\(^1\), Ray R.N.\(^3\), Waggoner L.P.\(^2\), Kauer J.S.\(^1\) \(^1\)Neuroscience, Tufts University, Boston, MA; \(^2\)Institute for Biological Detection Systems, Auburn University, Auburn, AL

Mid morning coffee available 9:30 AM - 10:00 AM

SYMPOSIUM

Saturday - 10:00 AM - 12:15 PM

Chemosensation: Psychophysical Measurement in the 21st Century
Chairperson: Lawrence E. Marks

10:00 235 Lawrence E. Marks
INTRODUCTION - CHEMOSENSATION: PSYCHOPHYSICAL MEASUREMENT IN THE 21ST CENTURY
Marks L.E.\(^1\) \(^1\)Epidemiology and Public Health/Psychology, Yale University, New Haven, CT

10:05 236 George A. Gescheider
ABSOLUTE MAGNITUDE ESTIMATION
Gescheider G.A.\(^1\) \(^1\)Psychology, Hamilton College, Clinton, NY

10:30 237 Linda M. Bartoshuk
THE PERILS OF ACROSS-GROUP COMPARISONS
Bartoshuk L.M.\(^1\) \(^1\)Surgery, Yale University, New Haven, CT
10:55 238 Robert A. Frank
USING FUNCTIONAL MEASUREMENT TO STUDY
CHEMOSENSORY RESPONSES
Frank R.A.1 Psychology, University of Cincinnati, Cincinnati, OH

11:20 239 Bruce A. Schneider
NONMETRIC SCALING OF SENSORY EVENTS:
ADVANTAGES AND DISADVANTAGES
Schneider B.A.1 Psychology, University of Toronto, Mississauga, Ontario, Canada

11:45 DISCUSSION
Susan Schiffman (Discussant)
Department of Psychiatry, Duke University

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

POSTERS

Saturday - 8:00 AM - 12:00 PM

Taste Receptor Cells

Sa-am-1 240 DROSOPIHAL OBPS EXPRESSED IN TASTE ORGANS
Smith D.P.1 Pharmacology and Center for Basic Neuroscience, University of Texas Southwestern Medical Center at Dallas, Dallas, TX

Sa-am-2 241 CALCIUM PUMP ISOFORMS IN CHEMORESPONSE
Gannon-Muarkami L.1, Yano J.1, Rakochy V.1, Valentine M.1, Preston R.R.1, Van Houten J.1 Biology, University of Vermont, Burlington, VT; Pharmacology and Physiology, MCP Hahnemann University, Philadelphia, PA

Sa-am-3 242 IDENTIFICATION OF RAT TASTE CELL TYPES EXPRESSING IP3R3
Clapp T.R.1, Yang R.1, Kinnamon S.C.1, Kinnamon J.C.2 Rocky Mountain Taste and Smell Center, University of Colorado Health Sciences Center, Denver, CO; Department of Biomedical Sciences, Colorado State University, Fort Collins, CO; Department of Biological Sciences, University of Denver, Denver, CO

Sa-am-4 243 ADENYLYL CYCLASES AND CAMP MODULATION IN TASTE BUDS
Abaffy T.1, Trubey K.R.1, Chaudhari N.1 Department of Physiology, University of Miami, Miami, FL

Sa-am-5 244 DETECTION OF TASTE QUALITY IN TASTE BUDS
Caicedo A.1, Kim K.1, Roper S.D.1 Physiology and Biophysics, University of Miami, Miami, FL

Sa-am-6 245 ELECTROPSYCHOLOGICAL CHARACTERIZATION OF VOLTAGE-GATED CURRENTS IN MOUSE TASTE CELL TYPES
Medler K.F.1, Margolskee R.F.2, Kinnamon S.C.1 Rocky Mountain Taste and Smell Center, University of Colorado Health Sciences Center, Denver, CO; Dept. of Biomedical Sciences, Colorado State University, Fort Collins, CO; Howard Hughes Med. Inst., Mt. Sinai School of Med. and Dept. of Phys. & Biophy., New York, NY

Sa-am-7 246 SYNAPTOBREVIN IS ASSOCIATED WITH SYNAPTIC VESICLES AT TASTE CELL SYNAPSES
Yang R.1, Stoick C.L.2, Kinnamon J.C.1 Department of Biological Sciences, University of Denver, Denver, CO; Department of Cellular and Structural Biology, UCHSC, Denver, CO

Sa-am-8 247 GENOME-WIDE PROFILING OF INDIVIDUAL TASTE RECEPTOR CELLS
Huang L.1, Liu Z.1, Max M.1, Margolskee R.F.1 Physiology and Biophysics, Mount Sinai School of Medicine, New York, NY

Sa-am-9 248 NEUROTROPHIN RECEPTORS IN RODENT TASTE BUDS
Yee C.L.1, Ogura T.3, Farbman A.L.1, Finger T.E.1 Department of Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO; Department of Anatomy and Neurobiology, Colorado State University, Fort Collins, CO; Neurobiology and Physiology, Northwestern University, Evanston, Illinois

Sa-am-10 249 STRUCTURE AND FUNCTION OF FUNGIFORM TASTE BUDS IN BAX-KNOCKOUT MICE
Yuskaitis C.J.1, May O.L.1, Hill D.L.1 Psychology, University of Virginia, Charlottesville, VA

Olfactory Receptors: Genes and Proteins

Sa-am-11 250 TOWARD A NOMENCLATURE FOR HUMAN AND MOUSE OLFATORY RECEPTORS
Craso C.J.1, Shepherd G.M.1 Neurobiology, Yale University, New Haven, CT
Sa-am-12 251 DEVELOPMENT OF AN IN VIVO EXPRESSION SYSTEM FOR FUNCTIONAL ANALYSIS OF INSECT OLFACTORY PROTEINS
Rogers M.E.1, Peterlin Z.A.1, Chesler A.T.1, Firestein S.1
1Biological Sciences, Columbia University, New York, NY

Sa-am-13 252 COMPARISON OF HOMOLOGOUS AND HETEROLOGOUS EXPRESSION SYSTEMS FOR OLFACTORY RECEPTORS
Bieri S.1, Monastyrskaia K.1, Valero A.1, Schilling B.1 1Bioscience, Givaudan Dubendorf Ltd, Dubendorf, Switzerland

Sa-am-14 253 FUNCTIONAL CHARACTERIZATION OF MOUSE ODORANT RECEPTOR, MOR-EG: EFFECTS OF RECEPTOR MODIFICATION AND MUTATIONS
Katada S.1, Tanaka M.1, Nakagawa T.1, Kajiya K.1, Kataoka H.1, Touhara K.1 1Department of Integrated Biosciences, University of Tokyo, Chiba, Japan

Sa-am-15 254 CHARACTERIZATION OF A FAMILY OF CANDIDATE ODORANT RECEPTORS FROM THE MALARIA VECTOR MOSQUITO ANOPHELES GAMBIAE
Fox A.N.1, Pits R.J.1, Robertson H.M.1, Zwiebel L.J.1 1Biological Sciences, Vanderbilt University, Nashville, TN; 2Cell & Structural Biology, University of Illinois at Urbana-Champaign, Urbana, IL

Sa-am-16 255 MOLECULAR STUDIES OF HUMAN OLFATORY RECEPTOR NEURONS
Wang H.1, Gomez G.1, Rawson N.E.1 1Rawson’s lab, Monell Chemical Senses Center, Philadelphia, PA

Olfactory Receptor Neurons: Functional Properties

Sa-am-17 256 SINGLE-UNIT RECORDING FROM GOLDFISH OLFATORY RECEPTOR NEURONS USING A WIDE RANGE OF BIOLOGICALLY RELEVANT ODORANTS SUGGESTS HIGH CHEMOSPECIFICITY
Sato K.1, Sorensen P.W.1 1Fisheries, Wildlife, and Conservation Biology, University of Minnesota, St. Paul, MN

Sa-am-18 257 UPDATE ON POLYAMINES AS OLFACATORY STIMULI IN GOLDFISH
Rolen S.H.1, Michel W.C.1, Caprio J.1 1Biological Sciences, LSU, Baton Rouge, LA; 2Physiology SOM, University of Utah, Salt Lake City, UT

Sa-am-19 258 METABOLIC PROFILE AND ODOR RESPONSIVENESS OF SQUID OLFATORY NEURON SUBTYPES
Sitichchai A.A.1, Michel W.C.1, Lucero M.T.1 1Physiology, University of Utah, Salt Lake City, UT

Sa-am-20 259 STATISTICAL METHOD FOR RAPID ANALYSIS OF OLFACTORY NEURON ACTIVITY
Blajec A.1 1Department of Invertebrate Physiology, National Institute of Biology, Ljubljana, Slovenia

Sa-am-21 260 MULTIDRUG RESISTANCE TRANSPORTERS IN OLFACATORY RECEPTOR NEURONS OF XENOPUS LAEVIS TADPOLES
Manzini L.1, Schild D.1 1Physiologisches Institut, University of Goettingen, Goettingen, Germany

Sa-am-22 261 SUPPRESSING OLFACATORY SENSORY NEURON (OSN) ACTIVITY WITH ULTRAVIOLET (UV)-LIGHT
Cheung M.C.1, Kauer J.S.1 1Neuroscience, Tufts University, Boston, MA

Sa-am-23 262 FUNCTIONAL AND BIOCHEMICAL DIFFERENCES BETWEEN MICROVILLAR AND CILIATED OLFACATORY RECEPTOR NEURONS IN CATFISH
Hansen A.1, Nikonov A.1, Anderson K.1, Morita Y.1, Finger T.E.1, Caprio J.1, Sorensen P.W.1 1Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO; 2Zoology and Physiology, Louisiana State University, Baton Rouge, LA; 3Anatomy and Physiology, Kagawa Prefect. Coll., Kagawa, Japan; 4Dept. of Fisheries, University of Minnesota, MN

Sa-am-24 263 DIFFERENTIAL RESPONSIVENESS OF CILIATED AND MICROVILLAR OLFACATORY RECEPTOR NEURONS IN GOLDFISH
Sorensen P.W.1, Caprio J.1, Hansen A.1, Anderson K.T.1, Finger T.E.1 1Fisheries, Wildlife and Conservation Biology, University of Minnesota, St. Paul, MN; 2Biological Sciences, Louisiana State University, Baton Rouge, LA; 3Cellular and Structural Biology, University of Colorado, Denver, Co

Sa-am-25 264 CON A SELECTIVELY BLOCKS DETECTION OF CARVONE ENANTIOMERS IN WISTAR RATS
Apfelbach R.1, Kirner A.1, Polak E.H.1 1Dept. of Zoology, University of Tuebingen, Tuebingen, Germany; 2Dept. of Chemistry, University of Warwick, Coventry, UK

Salt and Sour Taste

Sa-am-26 265 POLYMORPHISMS IN AN ACID SENSING ION CHANNEL (HFPASIC1) IN HUMAN FungiFORM PAPILLAE
Cao J.1, Haque T.1, Spielman A.I.1, Breslin P.A.1, Brand J.1 1Neurosci, Monell, Philadelphia, PA; 2Dentistry, New York University, New York, NY; 3Sensory, Monell, Philadelphia, PA; 4Neurosci, Monell Chemical Senses Center, Philadelphia, PA
Sa-am-27 266 TRANSCRIPTION OF ENAC SUBUNITS IN THE DEVELOPING RAT
Binder D.R.1, Posner E.D.1, Hill D.L.1 1Psychology, University of Virginia, Charlottesville, VA

Sa-am-28 267 CHARACTERIZATION OF ACID SENSITIVE ION CHANNELS (ASICS) IN MOUSE TASTE CELLS
Buffington N.1, Medler K.1, Kinnamon S.C.1 1Biomedical Sciences, Colorado State University, Fort Collins, CO

Sa-am-29 268 EVIDENCE FOR EXPRESSION OF TASK-LIKE K+ CHANNELS IN RAT TASTE CELLS
Lin W.1, Rao S.1, Kinnamon S.C.1, Gilbertson T.2 1Cell and Structural Biology, Univ. of Colorado Health Sciences Center, Denver, CO; 2Biology, Utah State Univ., Logan, Utah; 1Anat. & Neurobiol., Colorado State University, Fort Collins, CO

Sa-am-30 269 ACUTE REGULATION OF RAT NACL TASTE RESPONSES BY PH
Alam R.I.1, Phan T.T.1, Russell O.F.1, Heck G.L.1, Desimone J.A.1, Lyall V.1 1Physiology, Virginia Commonwealth University, Richmond, VA

Sa-am-31 270 ACUTE REGULATION OF RAT NA CL TASTE RESPONSES BY CAMP AND CALCIUM
Russell O.F.1, Phan T.T.1, Alam R.I.1, Heck G.L.1, Lyall V.1, Desimone J.A.1 1Physiology, Virginia Commonwealth University, Richmond, VA

Sa-am-32 271 CPC-SENSITIVE SALT TASTE RESPONSE IN RAT: DOSE-RESPONSE AND VOLTAGE-SENSITIVITY
Desimone J.A.1, Heck G.L.1, Phan T.T.1, Alam R.I.1, Russell O.F.1, Lyall V.1 1Physiology, Virginia Commonwealth University, Richmond, VA

Sa-am-33 272 GLOSSOPHARYNGEAL NERVE TRANSECTION DOES NOT COMPROMISE CHLORIDE SALT DISCRIMINATION IN THE RAT
Geran L.C.1, Spector A.C.1 1Department of Psychology, University of Florida, Gainesville, FL

Chemical Ecology and Behavior

Sa-am-34 273 SOLID PHASE MICROEXTRACTION HEADSPACE ANALYSIS OF URINARY VOLATILES FROM ADULT MALE MOOSE
Whittle C.L.1, Bowyer B.2, Preti G.3, Clausen T.P.1 1Chemistry & Biochemistry, University of Alaska Fairbanks, Fairbanks, AK; 2Department of Biology and Wildlife, University of Alaska Fairbanks, Fairbanks, AK; 3Monell Chemical Senses Center, Philadelphia, PA

Sa-am-35 274 THE HONEYED MESSAGE OF MUSTH IN ASIAN ELEPHANTS, ELEPHAS MAXIMUS
Rasmussen L.E.1, Riddle H.S.3, Goodwin T.E.1, Krishnamurthy V.3, Greenwood D.R.3 1Biochemistry, Oregon Graduate Institute, Beaverton, OR; 2Riddles Elephant Sanctuary, AR; 3Chemistry, Hendrix College, AR; 1Indian Institute of Science, India; 3HORT Research Institute, New Zealand

Sa-am-36 275 MECHANISMS FACILITATING SCENT OVER-MARKING IN FEMALE GOLDEN HAMSTERS
Johnston R.E.1 1Psychology, Cornell University, Ithaca, NY

Sa-am-37 276 ODORS DETECTED BY GOLDEN HAMSTERS PRIOR TO TWO DAYS OF AGE ARE DIFFERENTIALLY UTILIZED DURING LATER DEVELOPMENT
Larimer S.C.1, Johnston R.E.1 1Psychology Dept., Cornell University, Ithaca, NY

Sa-am-38 277 MAMMALIAN MODEL OF AGGRESSION AND SMELL
Voznesenskaya V.V.1, Wysocki C.J.1 1Institute of Ecology & Evolution RAS, Moscow, Russia; 1Monell Chemical Senses Center, Philadelphia, PA

Sa-am-39 278 PSYCHOPHYSICS OF ODOR DETECTION THRESHOLD IN A MODEL SYSTEM
Kryz G.1, Daly K.1, Smith B.1 1Entomology, Ohio State University, Columbus, OH

Sa-am-40 279 NOVEL RELEASE MECHANISM FOR A SEA LAMPREY SEX PHEROMONE
Yun S.1, Siefkes M.1, Scott S.1, Zielinski B.3, Belanger A.1, Li W.1 1Department of Fisheries and Wildlife, Michigan State University, East Lansing, MI; 3Weymouth Laboratory, The Center for Environment, Fisheries, & Aquaculture Science, Weymouth, Dorset, United Kingdom; 1Department of Biological Sciences, University of Windsor, Windsor, Ontario, Canada
Sa-am-41 280 EXPERIMENTAL EVIDENCE THAT 7,12,24-TRIHYDROXY-5'-CHOLAN-3-ONE 24-SULFATE FUNCTIONS AS A SEA LAMPREY SEX PHEROMONE
Siepes K.J., Li W.  
Department of Fisheries and Wildlife, Michigan State University, East Lansing, MI

Sa-am-42 281 RELATING BEHAVIOR TO OLFACTION IN THE ROUND GOBY, NEOEOBIUS MELANOSTOMUS (PERCIFORMES: GOBIIDAE).
Belanger R.M., Smith C.M., Zielinski B., Corkum L.D.  
Department of Biological Sciences, University of Windsor, Windsor, ON, Canada

Sa-am-43 282 THE EFFECT OF EXPOSURE TO DOMINANCE ODOR ON SOCIAL BEHAVIOR IN CRAYFISH, ORCONECTES RUSTICUS
Bergman D.A., Moore P.A.  
Biological Sciences, Bowling Green State University, Bowling Green, OH

Sa-am-44 283 THE EFFECT OF ELEVATED CO2 DETRITUS ON THE FORAGING DECISIONS OF CRAYFISH (ORCONECTES VIRILIS)
Adams J.A., Tuchman N.C., Moore P.A.  
Laboratory for Sensory Ecology, Bowling Green State University, Bowling Green, OH; Biology, Loyola University, Chicago, IL; Biological Sciences, Bowling Green State University, Bowling Green, OH

Sa-am-45 284 INDUCED HOST PREFERENCE IN SPODOPTERA LITTORALIS
Sjoholm M., Anderson P.J., Hansson B.S.  
Crop Science, Swedish University of Agricultural Sciences, A/rnap, Sweden

Sa-am-46 285 POLLINATION BY DECEPTION - CARRION MIMICRY IN THE DEAD HORSE ARUM
Stensmyr M., Uru L., Colli L., Angiyo A., Hansson B.  
Crop Science, Swedish University of Agricultural Sciences, A/rnap, Sweden; Department of Experimental Biology, University of Cagliari, Monserrato, Italy

Cash Lunch Carts Available, 12:00 PM - 1:30 PM (Prefunction Area)

Clinical Luncheon, 12:15 PM - 2:00 PM (Salons C & D)

SLIDES

Saturday - 7:00 PM - 8:00 PM

Stimulus Interactions
Chairperson: Pamela Dalton

7:00 286 BITTERNESS INHIBITION USING THE BITTER COMPOUND UREA
Keast R., Bournazel M., Breslin P.A.  
Taste, Monell Chemical Senses Center, Philadelphia, PA; Taste, Firmenich SA / Monell Chemical Senses Center, Philadelphia, PA

7:15 287 Olfactory Detectability of Single Chemicals and Mixtures
Cometto-Muniz J.E., Cain W.S., Abraham M.H.  
Surgery (Otolaryngology), University of California, San Diego, La Jolla, CA; Chemistry, University College London, London, United Kingdom

7:30 288 Systematic Changes in the Types of Odor Interactions Are Related to the Molecular Structure of the Components
Laing D., Jinks A.L., Segovia C., Hutchinson I.  
Centre for Advanced Food Research, University of Western Sydney, Penrith, New South Wales, Australia

7:45 289 Do Somatosensory Tactile Stimuli Interact with Taste and Aroma Signals to Modulate Perception?
Cook D., Hollowood T.A., Linforth R.S., Taylor A.J.  
Department of Food Science, Nottingham University, Leicestershire, United Kingdom
Evening Break 8:00 PM - 8:15 PM

SYMPOSIUM

Saturday - 8:15 PM - 10:30 PM

New Insights Into Phosphoinositol Signaling
Chairpersons: Barry W. Ache and Sue Kinnamon

8:15  290  Barry W. Ache
INTRODUCTION: NEW INSIGHTS INTO
PHOSPHOINOSITOL SIGNALING
Ache B.W.,1, Kinnamon S.C.:1 Whitney Laboratory, University of
Florida, St. Augustine, FL;2 Colorado State University, Fort
Collins, CO

8:20  291  Donald W. Hilgemann
THE COMPLEX AND INTRIGUING LIVES OF PIP2 WITH
ION CHANNELS AND TRANSPORTERS.
Kang D.M.,1, Feng S.,1, Nasuhoglu C.,1, Hilgemann D.W.:1 Dept. of
Physiology, University of Texas Southwestern Medical Center,
Dallas, TX

8:55  292  Christian Harteneck
DIVERSITY AND FUNCTIONS OF TRP CHANNEL
SUBFAMILIES
Harteneck C.:1 Institute of Pharmacology, Free University Berlin,
Berlin, Germany

9:30  293  Barry W. Ache
3-PHOSPHOINOSITIDE SIGNALING IN OLFACTORY
RECEPTOR CELLS
Ache B.W.:1 Whitney Lab, University of Florida, St. Augustine,
FL

9:55  294  Sue C. Kinnamon
PHOSPHOINOSITIDE SIGNALING IN TASTE CELLS
Kinnamon S.C.:1 Dept. of Anatomy & Neurobiology, Colorado
State University, Fort Collins, CO

10:20  DISCUSSION

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

POSTERS

Saturday - 7:00 PM - 11:00 PM

Assessment of Discrimination and Sensitivity

Sa-pm-1  295  THE PREVALENCE OF ANDROSTENONE ANOSMIA MAY
BE LOWER THAN PREVIOUSLY ESTIMATED
Bremner E.:1, Mainland J.:1, Sobel N.:1 Neuroscience, University of
California, Berkeley, CA

Sa-pm-2  296  DETECTION THRESHOLDS FOR PHENYL ETHYL
ALCOHOL USING SERIAL DILUTIONS IN DIFFERENT
SOLVENTS
Tsukatani T.:1, Miwa T.:1, Furukawa M.:1, Costanzo R.M.:1
Physiology, Virginia Commonwealth University, Richmond, VA;
Otorhinolaryngology, Kanazawa University, Kanazawa, Japan

Sa-pm-3  297  DETECTION OF GLUTARALDEHYDE IN WATER:
CHANGING SENSITIVITY AND SPECIFIC ANOSMIA
Schmidt R.:1, Cain W.S.:1 Surgery, University of California, San
Diego, La Jolla, CA

Sa-pm-4  298  ORAL FAT EXPOSURE AUGMENTS THE "SECOND MEAL"
EFFECT IN HUMANS
Matte R.D.:1 Foods and Nutrition, Purdue University, West
Lafayette, IN

Sa-pm-5  299  OLFACTORY DISCRIMINATION OF FATTY ACIDS IN
RATS WITH LARGE BILATERAL LESIONS OF THE
OLFACTORY BULBS
Bisulco S.:1, Slotnick B.:1 Department of Psychology, American
University, Washington, DC
Biologically Relevant Odors in Humans

Sa-pm-10  304  DETECTION THRESHOLDS FOR 4,16-ANDROSTADIEN-3-ONE
Olsson M.J., Lundstrom J.N., Hicks A.S.  Psychology, Uppsala University, Uppsala, Sweden

Sa-pm-11  305  THE SMELL OF EMOTION: OLFATORY COMMUNICATION OF EMOTION IN HUMANS
Chen D., Mcclintock M.K.  Psychology Department and Institute for Mind and Biology, University of Chicago, Chicago, IL

Sa-pm-12  306  PSYCHOLOGICAL EFFECTS OF SUBTHRESHOLD EXPOSURE OF 4,16-ANDROSTADIEN-3-ONE ON WOMEN
Lundstrom J.N., Olsson M.J.  Psychology, Uppsala University, Uppsala, Sweden

ANDROSTADIENONE AFFECTS COURTSHIP-LIKE BEHAVIORS IN WOMEN
Wilson P.J., Haviland-Jones J.S., Wysocki C.J., Warrenburg S., Christensen C.  Research & Development, International Flavors & Fragrances, Union Beach, NJ; Psychology, Rutgers, The State University of New Jersey, Piscataway, NJ; Monell Chemical Senses Center, Philadelphia, PA

PHYSIOLOGICAL AND PSYCHOLOGICAL EFFECTS OF TWO PUTATIVE HUMAN PHEROMONES
Brown W.S., Johnson B., Mainland J., Bremner E., Tsutsui T., Moguel S., Bensafi M., Sobel N.  Psychology, University of California, Berkeley, CA; Bioengineering, University of California, Berkeley, CA; Neuroscience, University of California, Berkeley, CA

CROSS-CULTURAL INVESTIGATION OF BODY ODOR
Huebener F., Ayabe-Kanamura S., Laska M., Kobayakawa T., Saito S.  Department of Medical Psychology, University of Munich, Munich, Germany; Institute of Neuroscience, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, Japan

HUMAN AXILLARY ODORS FORMED BY ENDOGENOUS BACTERIA

Neural Coding in the Central Olfactory System

ANALYSIS OF DOSE-RESPONSE FUNCTIONS IN THE ANTENNAL LOBE OF THE MOTH SPODOPTERA LITTORALIS
Carlsson M.A., Hansson B.S.  Department of Crop Sciences, Swedish University of Agricultural Sciences, Aback, Sweden

SENSOR PROCESSING OF ENVIRONMENTAL-CO2 INFORMATION IN THE MOTH NERVOUS SYSTEM
Guerrero P.G., Christensen T.A., Hildebrand J.G.  ARL Div. of Neurobiology, University of Arizona, Tucson, AZ

REPRESENTATION OF PHEROMONE BLENDS BY PROJECTION NEURONS IN HELIOTINE MOTHS
Kleinidam C., Vickers N., Linn J.  Biology, University of Utah, Salt Lake City, UT; Entomology, Cornell University, Geneva, NY
Brainstem Circuits

Sa-pm-28 322 NEUROBIOLOGY OF THE RAT INFERIOR SALIVATORY NUCLEUS
Kim M.1, Cheigo Jr. D.J.2, Bradley R.M.3 1Nursing, Chonnam University Medical School, Gwangju, Korea; 2Biologic & Materials Science, University of Michigan, Ann Arbor, MI

Sa-pm-29 323 LATERAL HYPOTHALAMUS AND AMYGDALA MODULATE TASTE RESPONSES OF PARABRACHIAL NEURONS
Li C.1, Cho Y.K.1, Smith D.V.2 1Anatomy & Neurobiology, University of Maryland, Baltimore, Baltimore, MD

Sa-pm-30 324 CONVERGENCE OF FOREBRAIN INFLUENCES ON TASTE NEURONS OF THE SOLITARY NUCLEUS
Cho Y.K.1, Li C.1, Smith D.V.2 1Anatomy & Neurobiology, University of Maryland, Baltimore, Baltimore, MD

Sa-pm-31 325 MODULATION OF PONTINE TASTE ACTIVITY BY CENTRIFUGAL INPUTS UNDER TASTE
Tokita K.1, Karadi Z.2, Shimura T.3, Yamamoto T.4 1Division of Behavioral Physiology, Department of Behavioral Science, Graduate School of Human Sciences, Osaka University, Suita, Osaka, Japan; 2Institute of Physiology, Pecs University, Medical School, Pecs, Hungary

Sa-pm-32 326 VARIABILITY OF TASTE RESPONSE MAGNITUDE IN THE NUCLEUS OF THE SOLITARY TRACT WITH STIMULUS REPETITION
Di Lorenzo P.M.1, Victor J.D.2 1Psychology, Binghamton University, Binghamton, NY; 2Neurology and Neuroscience, Weill Medical College of Cornell University, New York, NY

Sa-pm-33 327 EFFECTS OF GLOS SOPHARYNGEAL ANESTHESIA ON TASTE RESPONSES IN THE NUCLEUS OF THE SOLITARY TRACT OF THE RAT
Reich C.G.1, Di Lorenzo P.M.1 1Psychology, Binghamton University, Binghamton, NY

Sa-pm-34 328 GURMARIN SUPPRESSION OF SUCROSE RESPONSES IN RAT SOLITARY NUCLEUS NEURONS
Ndubizu O.1, Lemon C.H.2, Imoto T.3, Smith D.V.2 1Anatomy & Neurobiology, University of Maryland, Baltimore, Baltimore, MD; 2Physiology, Tottori University, Yonago, City, Japan

Sa-pm-35 329 AN ARTIFICIAL NEURAL NETWORK MODEL OF TASTE INFORMATION PROCESSING
Lemon C.H.1, Smith D.V.2 1Anatomy & Neurobiology, University of Maryland, Baltimore, Baltimore, MD
Sa-pm-36  330  ELECTRICAL STIMULATION OF THE PBN ELICITS INGESTIVE OROMOTOR BEHAVIORS IN CONSCIOUS RATS: A TOPOGRAPHIC ANALYSIS.  
King M.S.,1 Dykes R.E., King C.T.2 1Biology, Stetson University, Deland, FL; 2Psychology, Stetson University, DeLand, FL

Sweet Taste

Sa-pm-37  331  IONIC CONTROL OF SWEET TASTE QUALITY  
Haywood K.A.,1 Giraud D.A.,1 Birch G.G.1 School of Food Biosciences, The University of Reading, Reading, Berkshire, United Kingdom; 2ENSANA, University of Burgundy, Dijon, Bourgogne, France

Sa-pm-38  332  WHERE ARE THE CRITICAL REGIONS FOR BRAZZEIN’S SWEET TASTE? HUMAN PSYCHOPHYSICAL AND MONKEY ELECTROPHYSIOLOGICAL RESPONSES TO BRAZZEIN MUTANTS  
Jin Z.,1 Danilova V.,1 Markley J., Hellekant G. 1AHABS, University of Wisconsin-Madison, Madison, WI; 2Biochemistry, University of Wisconsin-Madison, Madison, WI

Sa-pm-39  333  GYMNEMA SYLVESTRE SWEET-BLOCKING EFFICACY ON TONGUE TIP VS. WHOLE MOUTH  
Delwiche J.F.1, Beilstein C.2 Food Science, Ohio State, Columbus, OH; 2Psychology, OSU, Columbus, OH

Sa-pm-40  334  MIMICRY OF SUCROSE TASTE WITH NON-CALORIC SWEETENERS  
D’Angelo L.L.1, King G.A.1, Dubois G.E.1 Technical Division, The Coca-Cola Company, Atlanta, GA

Sa-pm-41  335  DISCRIMINATION OF GLUCOSE AND FRUCTOSE AFTER ADAPTATION BUT NOT BEFORE  
Tharp C.D.1, Breslin P.A.1 Sensory, Monell Chemical Senses Center, Philadelphia, PA

Sa-pm-42  336  GENERALIZATION OF A CONDITIONED AVERSION TO LICK-CONTINGENT ELECTRICAL STIMULATION OF THE NUCLEUS OF THE SOLITARY TRACT TO A NATURAL TASTE  
Hallock R.,1 Di Lorenzo P.M.1 Psychology, Binghamton University, Binghamton, NY

Sa-pm-43  337  DIFFERENTIAL EFFECTS OF ESTROGEN ON LICKING RATES AND INGESTION OF SUCROSE AND NACL SOLUTIONS  
Curtis K.S.1, Davis L.M.1, Therrien K., Contreras R.J.1 Psychology, Florida State University, Tallahassee, FL

Sa-pm-44  338  USE OF AN OPERANT SIGNAL DETECTION TASK TO ASSESS SUCROSE SENSITIVITY IN INBRED MOUSE STRAINS DIFFERING IN SUGAR PREFERENCE  
Eylam S.,1 Spector A.C.1 1Department of Psychology, Univ. of Florida, Gainesville, FL

Sa-pm-45  339  GUSTATORY RESPONSES TO POLYCOSE IN FOUR SPECIES OF NONHUMAN PRIMATES  
Laska M.1, Kohlmann S.1, Hernandez-Salazar L.T.2, Rodriguez-Luna E.2 1Department of Medical Psychology, University of Munich, Munich, Germany; 2Instituto de Neuro-Etologia, Universidad Veracruzana, Xalapa, Mexico

Sa-pm-46  340  POLYMORPHISMS OF THE MOUSE TAS1R3 GENE ARE RELATED TO SWEETENER PREFERENCES IN 30 STRAINS OF MICE  
Bachmanov A.A.1, Li S., Li X., Li K., Tordoff M.G.1, West D.B.3, Ohmen J.D.3, Reed D.R.1, Beauchamp G.K.1 Monell Chemical Senses Center, Philadelphia, PA; 2Pfizer Global Research and Development, Alameda, CA

Sa-pm-47  341  DROSOPHILA SWEET-TASTE GENE TRE IS IDENTICAL TO A GUSTATORY RECEPTOR GENE GRSA.  
Morita H.1, Ueno K.3, Matsubayashi H.4, Isono K.5 1Information Biology, Tohoku University, Sendai, Japan; 2Institute for Behavior Sciences, Gunma University School of Medicine, Maebashi, Japan; 3Drosophila Genetic Resource Center, Kyoto Institute of Technology, Kyoto, Japan; 4Information Biology, Tohoku University Graduate School of Information Sciences, Sendai, Japan

Sa-pm-48  342  A GR RECEPTOR IS REQUIRED FOR RESPONSE TO THE SUGAR TREHALOSE IN TASTE NEURONS OF DROSOPHILA.  
Dahanukar A.,1 Van Der Goes Van Naters W.1, Foster K.1, Carlson J.R.1 1MCDB, Yale University, New Haven, CT
Continental Breakfast, 7:30 AM - 9:00 AM (Prefunction Area)

SLIDES

Sunday - 8:30 AM - 10:00 AM

Ion Channels and Function of Chemosensory Cells
Chairperson: Scott Herrness

8:30  343  CALCIUM PUMPS, LIPID RAFTS AND GPI ANCHORED PROTEINS IN CHEMORESPONSE
Yano J.1, Rakochy V.1, Preston R.R.2, Van Houten J.1 1Biology, University of Vermont, Burlington, VT; 2Physiology and Pharmacology, MCP Hahnemann University, Philadelphia, PA

8:45  344  CHORDA TYMPANI (CT) NEURONS EXPRESS NEUROTROPHIN RECEPTOR GENES DIFFERENT FROM GREATER SUPERFICIAL PETROSAL (GSP) NEURONS
Farbman A.I.1, Sollars S.2, Guagliardo N.3, Hill D.3 1Neurobiology and Physiology, Northwestern University, Evanston, IL; 2Psychology, University of Nebraska at Omaha, Omaha, NE; 3Psychology, Univ. of Virginia, Charlottesville, VA

9:00  345  THE ROLE OF CAMP AND CA2+ IN THE EXCITATION AND ADAPTATION OF TASTE RESPONSES TO HCL
Lyall V.1, Alam R.I.1, Phan T.T.1, Vinnikova A.K.2, Desimone S.K.1, Heck G.L.1, Desimone J.A.1 1Physiology, Virginia Commonwealth University, Richmond, VA; 2Internal Medicine, Virginia Commonwealth University, Richmond, VA

9:15  346  EXPRESSION OF EPITHELIAL SODIUM CHANNELS (ENACS) IN HUMAN FUNGIFORM PAPILLAE
Huque T.1, Wysocki L.1, Bayley D.1, Breslin P.A.2, Spiegelman A.3, Brand J.1 1Neurosci, Monell Chemical Senses Center, Philadelphia, PA; 2Sensory, Monell Chemical Senses Center, Philadelphia, PA; 3College of Dentistry, New York University, New York, NY

9:30  347  PACAP MODULATES POTASSIUM CURRENTS AND PROMOTES SURVIVAL OF OLFACTORY RECEPTOR NEURONS
Han P.1, Hegg C.C.1, Roskams A.J.2, Lucero M.T.1 1Physiology, University of Utah, Salt Lake City, UT; 2Centre for Molecular Medicine, Univ. of British Columbia, Vancouver, BC, Canada

9:45  348  MECHANISM UNDERLYING ODOR INHIBITION IN TOAD OLFACTORY RECEPTOR NEURONS.
Madrid R.1, Bacigalupo I.1 1Sensory Physiol. Lab., Millenium Institute CBB, Santiago, Chile

Mid morning coffee available 9:30 AM - 10:00 AM

SLIDES

Sunday - 10:00 AM - 11:00 AM

The Ecology of Chemical Signals
Chairperson: Charles Derby

10:00  349  THE SCENT OF DANGER: CHEMICAL ALARM SIGNALS AND ESCAPE FROM CANNIBALISM IN NEWTS
Schar D.W.1, Krug P.J.1, Zimmer R.K.1 1Biology, UCLA, Los Angeles, CA

10:15  350  CHEMICAL ATTRACTANTS AS CHEMICAL DEFENSES
Johnson P.M.1, Paul V.J.2, Cruz-Rivera E.1, Derby C.D.1 1Biology, Georgia State University, Atlanta, GA; 2University of Guam, Marine Laboratory, Mangilao, GU

10:30  351  LARVAL REEF FISH COULD USE ODOR FOR DETECTION, RETENTION AND ORIENTATION TO REEFS
Atema J.1, Kingsford M.J.2, Gerlacch G.3 1Boston University Marine Program, Boston University, Woods Hole, MA; 2School of Biological Sciences, University of Sydney, Sydney, NSW, Australia; 3Marine Resources Center, Marine Biological Laboratory, Woods Hole, MA

10:45  352  ODOR PLUMES AND HYDRODYNAMICS: HOW CRAYFISH FIND ODOR SOURCES
Moore P.A.1 1Biological Sciences, Bowling Green State University, Bowling Green, OH
POSTERS

Sunday - 8:00 AM - 12:00 PM

Event Related Potentials

Su-am-1 353 INTRAINDIVIDUAL CORRELATION OF CHEMOSENSORY EVENT RELATED POTENTIALS
Welge-Lüssen A.C., Wille C., Renner B., Kobal G. ENT Department, University Hospital Basel, Basel, Switzerland; Department of Clinical and Experimental Pharmacology, University of Erlangen-Nürnberg, Erlangen, Germany

Su-am-2 354 APOLIPOPROTEIN E4-POSITIVE INDIVIDUALS SHOW INCREASED Olfactory EVENT-RELATED POTENTIAL LATENCIES AT 2-YEAR FOLLOW-UP
Wetter S., Zizak V., Broman D., Murphy C. Psychology, San Diego State University/University of California, San Diego, San Diego, CA; Psychology, San Diego State University, San Diego, CA; Psychology, Umeå University, Umeå, Sweden

Su-am-3 355 A STUDY OF HYPOADDITIVITY USING DICORHINAL STIMULATION
Jacob T.J., Fraser C.S., Wang L. Biosciences, Cardiff University, Cardiff, United Kingdom

Su-am-4 356 STEREOSPECIFICITY OF ELECTROPHYSIOLOGICAL AND SUBJECTIVE RESPONSES OF NICOTINE
Gallotta F.P., Hayes C.S. Worldwide Scientific Affairs, Philip Morris U.S.A., 13065 Hill Club Lane, Ashland, VA 23005; Product Design and Evaluation, Philip Morris U.S.A., Richmond, VA

Su-am-5 357 TRIGEMINAL EVENT-RELATED POTENTIALS: RELATION TO STIMULUS DURATION AND INTENSITY
Franselli J., Loetsch J., Hummel T. Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany; Clinical Pharmacology, University of Frankfurt/Main, Frankfurt/Main, Germany

Chemosensory Cortical Processing

Su-am-6 358 Olfactory PROCESSING AND MEDIAL FRONTAL CORTEX: ELECTROPHYSIOLOGICAL APPROACH
Bouret S., Kuhlik E., Wilson D.A., Sara S.J. Neurmodulation & Processus Mnésiques, Univ P & M Curie, Paris, France; Department of Zoology, University of Oklahoma, Norman, OK

Su-am-7 359 NEURAL CORRELATES OF CORTICAL ODOR HABITUATION
Best A.R., Wilson D.A. Department of Zoology, University of Oklahoma, Norman, OK

Su-am-8 360 OLFACTORY MEMORY AND THE MEDIAL FRONTAL CORTEX IN THE RAT
Tronel S., Sara S.J. Neurmodulation et Processus Mnésique, Univ P & M Curie, Paris, France

Su-am-9 361 TASTE, TEXTURE, AND FAT REPRESENTATIONS IN THE PRIMATE ORBITOFRONTAL CORTEX
Verhagen J.V., Rolls E.T., Kadohisa M. Experimental Psychology, University of Oxford, Oxford, United Kingdom

Su-am-10 362 TEMPORAL ASPECTS OF GUSTATORY CODING OBTAINED FROM CORTICAL ENSEMBLES IN AWAKE RATS
Katz D.B., Simon S.A., Nicoletis M.A. Neurobiology, Duke University, Durham, NC

Su-am-11 363 DIFFERENT REACTION OF HUMAN BRAIN TO THE INVIGORATING AND RELAXING ODORS
Wang J., Eslinger P.J., Smith M.B., Yang Q.X., Ansari R. Radiology, Pennsylvania State University, Hershey, PA; Neurology, Pennsylvania State University, Hershey, PA; Technical Affairs, Quest International Fragrances Company, NJ

Su-am-12 364 TEMPORAL LOBE OLFACTORY CORTEX ACTIVATION DURING SNIFING AND VELOPHARYNGEAL CLOSURE
Sabri M., Kareken D.A., Hector D., Claus E.D., Hutchins G.D. Neurology, Indiana University School of Medicine, Indianapolis, IN; Psychology, Indiana University, Bloomington, IN; Radiology, Indiana University School of Medicine, Indianapolis, IN

Su-am-13 365 REDUCED TASTE INTENSITY PERCEPTION IN PATIENTS WITH IPSILATERAL OR BILATERAL INSULAR ATROPHY DUE TO PRIMARY PROGRESSIVE APHASIA
Srinivasan R., Small D. Neurology, Northwestern University Medical School, Chicago, IL

Su-am-14 366 OLFACTORY MARKER PROTEIN IS EXPRESSED IN THE VISUAL CORTEX OF RATS AND CATS
Weiler E. Neurophysiology, Ruhr-University, Bochum, NRW, Germany
Hedonics

Su-am-15  367  CEPHALIC PHASE SALIVARY RESPONSE DIFFERENCES CHARACTERIZE LEVEL OF FOOD NEOPHOBIA
Meyer B.1, Raudenbush B.1, Kozlowski A.2, Corley N.2, Flower N.2
1Counseling, Appalachian State University, Boone, NC;
2Psychology, Wheeling Jesuit University, Wheeling, WV;
3Adolescent Services, Northwood Health Systems, Pittsburgh, PA

Su-am-16  368  GENERALIZABILITY VS. SPECIFICITY OF PSYCHOPHYSICAL RATINGS MADE BY FOOD NEOPHOBICS AND NEOPHILICS ACROSS ALL SENSORY DIMENSIONS
Kozlowski A.1, Raudenbush B.1, Tornifolio B.3 1Psychology, Wheeling Jesuit University, Wheeling, WV

Su-am-17  369  REFRESHMENT IS DISTINGUISHED BY A DISCRETE SUBJECTIVE CHANGE
Schooler J.W., Halpern D.V. 1Psychology/Learning Research and Development Center, University of Pittsburgh, Pittsburgh, PA;
2Psychology, University of Pittsburgh, Pittsburgh, PA

Su-am-18  370  MODULATION OF THE HUMAN ACOUSTIC STARTLE REFLEX BY TEA AROMAS: A COMPARISON OF ASIAN AND NON-ASIAN SUBJECTS
Aspen J.M.1, Kaviani H.1, Scott D.S.2, Gray J.A.2 1Beverages Innovation, Unilever R & D, Sharnbrook, Bedford, United Kingdom;
2Dept. of Psychology, Institute of Psychiatry, London, United Kingdom

Su-am-19  371  EFFECTS OF AMBIENT FLORAL ODORS ON FAMILY ACTIVITIES AND SELF PERCEPTIONS
Hirsch A.R.1 1Neurological Director, The Smell & Taste Treatment and Research Foundation, Chicago, IL

Su-am-20  372  AMELIORATING AGRICULTURAL ODORS: DOWN ON THE FARM
Louie J.1, Wysocki C.J.1, Preti G.1, Pitcher P.2, Kim J.J.1, Connolly L.1 1Monell Chemical Senses Center, Philadelphia, PA;
2Sch Vet Med, University of Pennsylvania, Kennett Sq., PA

Umami Taste

Su-am-21  373  BEHAVIORAL EVIDENCE FOR A ROLE OF GUSTUCIN IN UMAMI TAST
Ruiz C.1, Delay E.2, Margolskee R.1, Kinnamon S.C.1 1Rocky Mountain Taste and Smell Center, University of Colorado Health Sciences Center, Denver, CO, Department of Anatomy & Neurobiology, Colorado State University, Fort Collins, CO;
2Neuroscience Program, Regis University, Denver, CO, 1Howard Hughes Medical Institute, The Mount Sinai School Of Medicine, New York, NY

Su-am-22  374  DISCRIMINATION BETWEEN TASTES OF MONOSODIUM GLUTAMATE AND GLUTAMATE AGONISTS IN RATS.
Delay E.R.,1 Sewczak G.M.1, Stapleton J.R.2, Roper S.D.2 1Neuroscience Program, Regis University, Denver, CO;
2Dept. Physiology & Biophysics and Neuroscience Program, University of Miami School of Medicine, Miami, FL

Su-am-23  375  GENERALIZATION OF CTA BETWEEN MONOSODIUM GLUTAMATE AND SWEET SUBSTANCES IN RATS.
Tran L.H.,2 Heyer B.R., Delay E.R.1 1Neuroscience Program, Regis University, Denver, CO

Su-am-24  376  DOUBLE-LABELING C-FOS MRNA AND PROTEIN IN THE RAT SOLITARY NUCLEUS AFTER SUCROSE AND MSG INGESTION.
Gropp J.K.1, Stapleton J.R.2, Barnes C.L.2, Delay E.R.1 1Neuroscience Program, Regis University, Denver, CO;
2Physical Therapy, Regis University, Denver, CO

Su-am-25  377  HUMAN RECEPTORS FOR SWEET AND UMAMI TASTE
Li X.1, Staszewski L.1, Xu H.1, Adler E.1 1Department of Biology, Senomyx, Inc., La Jolla, CA

Neurotransmitters and Neuromodulators

Su-am-26  378  NITRIC-OXIDE AS A POSSIBLE GAIN CONTROL IN THE OLFATORY SYSTEM
Cousins M.A.1, Daly K.C.1, Smith B.1 1Entomology, Ohio State University, Columbus, OH

Su-am-27  379  NO ACTS AS A COMPLEX MODULATOR OF RAT OLFATORY RECEPTOR NEURON ACTIVITY
Diaz J.1, Schmachtenberg O.1, Bacigalupo J.1 1Sensory Physiol. Lab., Millenium Institute CBB, Santiago, Chile
Su-am-28  380  SYSTEMIC L-NAME ATTENUATED LITHIUM-INDUCED C-FOS EXPRESSION IN THE BRAIN, BUT NO EFFECT ON THE ACQUISITION OF LITHIUM-INDUCED CONDITIONED TASTE AVERSION IN RATS.
Jahn J.W., Lee J.H., Houpt T.A.  Pharmacology, Yonsei University College of Medicine, Seoul, Seoul, South Korea; Oral and Maxillofacial Surgery, Seoul National University College of Dentistry, Seoul, Seoul, South Korea; Biological Sciences, Florida State University, Tallahassee, FL

Su-am-29  381  EXPERIMENTING NEURONAL AND MOLECULAR MECHANISMS THAT MEDIATE ODORANT-STIMULATED NITRIC OXIDE PRODUCTION IN THE ANTENNAL LOBE OF MANDUCA SEXTA
Wilson C., Collmann C., Nighorn A. ARLDN, University of Arizona, Tucson, AZ

Su-am-30  382  EXPRESSION AND FUNCTION OF NPY IN THE RAT Olfactory Bulb
Blakemore L.J., Alshingiti A.M., Levenson C.W., Trombley P.Q. Program in Neuroscience, Florida State University, Tallahassee, FL

Su-am-31  383  ACTIVATION OF PURINERGIC RECEPTOR SUBTYPES DIFFERENTIALLY MODULATES MOUSE ORN ODOR RESPONSIVENESS
Hegg C.C., Lucero M.T. Physiology, University of Utah, Salt Lake City, UT

Su-am-32  384  DOBAMINE INHIBITS ODOR RESPONSIVENESS AND EXCITABILITY IN MOUSE ORNS
Hegg C.C., Lucero M.T. Physiology, University of Utah, Salt Lake City, UT

Su-am-33  385  ELECTROPHYSIOLOGICAL, IMMUNOCYTOCHEMICAL, AND MOLECULAR ANALYSES OF KAINATE RECEPTORS IN THE RAT Olfactory Bulb
Davila N.G., Horning M.S., Blakemore L.J., Houpt T.A., Trombley P.Q. Biological Science, Florida State University, Tallahassee, FL

Su-am-34  386  MECHANISM OF GLUTAMATE EXCITATION OF THE SOMA AND PROXIMAL DENDRITE OF MITRAL CELLS
Lowe G. Monell Chemical Senses Center, Philadelphia, PA

Su-am-35  387  IONOTROPIC GLUTAMATE RECEPTOR ACTIVATION SELECTIVELY DEPLETES GABA LEVELS IN ZEBRAFISH Olfactory Bulb
Michel W.C., Edwards J.G. Physiology, University of Utah, Salt Lake City, UT

Su-am-36  388  PHARMACOLOGICAL CHARACTERIZATION OF IONOTROPIC GLUTAMATE RECEPTORS IN THE ZEBRAFISH Olfactory Bulb
Edwards J.G., Michel W.C. Physiology, University of Utah, Salt Lake City, UT

Su-am-37  389  METABOTROPIC GLUTAMATE RECEPTOR MGLUR1 DIRECTLY AND POTENTIALLY ACTIVATES MITRAL CELLS IN MAIN Olfactory Bulb SLICES
Heinbockel T., Ennis M. Anatomy & Neurobiology, University of Maryland School of Medicine, Baltimore, MD

Su-am-38  390  EXPRESSION OF SEROTONIN RECEPTORS IN RAT TASTE RECEPTOR CELLS.
Kaya N., Shen T., Herness M.S. Oral Biology, Ohio State University, Columbus, OH

Su-am-39  391  GABAERGIC CELLS IN THE GOLDFISH VAGAL LOBE
Anderson K., Böttger B., Lariviere K., Trudeau V., Finger T.E. Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO; Dept. Biology, Univ. Ottawa, Ottawa, Ontario, Canada

Su-am-40  392  CCK-8 POTENTIATES THE SYNAPTIC RESPONSE TO AFFERENT STIMULATION IN THE PRIMARY GUSTATORY NUCLEUS OF GOLDFISH
Sharp A.A., Finger T.E. Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO

Vomeronasal Organ

Su-am-41  393  INVESTIGATION OF THE SIGNAL TRANSDUCTION PATHWAY IN VOMERONASAL RECEPTOR NEURONS OF THE RAT
Spehr M., Hatt H., Wetzel C.H. Cell Physiology, Ruhr-University Bochum, Bochum, Germany

Su-am-42  394  NETRIN-1 REGULATES THE MIGRATION OF LHHRH NEURONS TO THE BASAL FOREBRAIN
Schwarting G., Raicheva D. Cell Biology, University of Massachusetts Medical School, Waltham, MA
Su-am-43  395  IMMUNOHISTOCHEMISTRY OF THE VOMERONASAL ORGAN IN CALLITRICHIDS AND PROSIMIANS: AN ONTOGENETIC STUDY  
Dennis J.C.1, Smith T.D.2, Bhattacharya M.K.2, Bonar C.J.3, Morrison E.1  
1 Anatomy, Physiology, Pharmacology, Auburn University, Auburn, AL; 2 School of Physical Therapy, Slippery Rock University, PA; 3 Anatomical Sciences and Neurobiology, University of Louisville, KY; 4 Primate, Cleveland Metroparks Zoo, OH

Su-am-44  396  ASSESSMENT OF OLFATORY FUNCTION AND ANDROSTENONE ODOR THRESHOLDS IN MAN WITH OR WITHOUT COVERING THE VOMERONASAL DUCT  
Kneckt M.1, Witt M.3, HüTtenbrink K.1, Hummel T.3  
1 Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany; 2 Anatomy, University of Dresden Medical School, Dresden, Germany

Su-am-45  397  EXPRESSION OF SECOND MESSENGER PATHWAYS IN THE VOMERONASAL ORGAN  
Bram J.H.1, Dennis J.C.3, Morrison E.E.2, Fadool D.A.1  
1 Program in Neuroscience, Florida State University, Tallahassee, FL; 2 Anatomy, Physiology and Pharmacology, Auburn University, Auburn, AL

Su-am-46  398  PHEROMONAL ACTIVATION OF VOMERONASAL NEURONS IN PLETHODONTID SALAMANDERS  
Wirsig-Vierchmann C.R.1, Houck L.D.2, Feldhoff P.W.3, Feldhoff R.C.3  
1 Department of Cell Biology, University of Oklahoma, Oklahoma City, OK; 2 Department of Zoology, Oregon State University, Corvallis, OR; 3 Department of Biochemistry and Molecular Biology, University of Louisville, Louisville, KY

BACHMANOV, ALEXANDER A, 340  
BACIGALUPO, JUAN, 348, 379  
BADEAU, R., 18  
BAKER, HARRETT, 144  
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