DATES OF FUTURE MEETINGS

April 24-28, 2002
April 9 - 13, 2003
The Association is very grateful for the generous support of our Corporate Sponsors

Twenty-Third Givaudan Lectureship
Givaudan Corporation

Sixteenth Annual Takasago Award for Research in Olfaction
Takasago Corporation

Tenth Annual Moskowitz Jacobs Award for Research in Psychophysics of Taste and Olfaction
Moskowitz Jacobs Incorporated

Eighth Annual Award to Promising Young Researchers in the Field of Gustation
Ajinomoto USA

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Wednesday, April 25, 2001

ASSOCIATION FOR CHEMORECEPTION SCIENCES

Twenty-Third Annual Meeting

10:00-12:00PM

Educational Outreach (Graz Science Center)
Organized by J. Stewart

12:00-3:30 PM

Executive Committee (Executive Board Room)
Organized by J. Caprio

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)
Dr. Steven Roper, President

8:30-9:30

Givaudan Lecture (Salons C, D, E, & F)
Dr. Rüdiger Wehner
Ant Navigation: Mini Brains–Mega Tasks–Smart Solutions
Chairperson: J. Scott

9:30 PM

Social Gathering and Cash Bar (Prefunction Area)

9:30 PM

Organizational Meeting for Students with Travel Awards
(Salon G)
Organizer: A. J. Nighorn, Student Services Coordinator
Continental Breakfast  7:30-9:00 AM

SLIDES

Thursday Morning - 8:15 AM - 9:30 AM

II. Gustatory Development
Chairperson: Theresa Harrison

8:15 AM 2  CELL CONTACT-DEPENDENT MECHANISMS SPECIFY TASTE BUD NUMBER EARLY IN EMBRYONIC DEVELOPMENT
Parker M.A.,1,2 Barlow L.A.,1,2 1Biological Science, Univ. of Denver, Denver, CO; 2Rocky Mountain Taste and Smell Center, UCHSC, Denver, CO

8:30 AM 3  SONIC HEDGEHOG IS AN INHIBITOR OF TASTE PAPILLA DEVELOPMENT
Hall J.M.,1 Helms J.A.,2 Finger T.E.1 1UCHSC, Denver, CO; 2UCSF, San Francisco, CA

8:45 AM 4  SHH ACTIVE IN TASTE PAPILLA DEVELOPMENT FROM TONGUE FORMATION THROUGH ADVANCED PAPILLA MORPHOGENESIS IN EMBRYONIC TONGUE CULTURES
Mistretta C.M.,1 Gaffield W.,2 Edwards C.,2 MacCallum D.K.,2 1School of Dentistry, Univ. Michigan, Ann Arbor, MI; 2Medical School, Univ. Michigan, Ann Arbor, MI;

9:00 AM 5  AUTODIFFERENTIATION OF TASTE BUDS IN PHARYNGEAL ENDODERM DEPENDS UPON EARLY SIGNALS FROM THE NOTOCHORD
Barlow L.A.,1,2 1Biological Sciences, Univ. of Denver, Denver, CO; 2Rocky Mountain Taste and Smell Center, UCHSC, Denver, CO

9:15 AM 6  DEVELOPMENTAL CHANGES IN NEUROTROPHIN RECEPTORS IN GENICULATE GANGLIUM NEURONS
Rozenblat A., Brunn J., Buchholz J.A., Farbman A.I. Neurobiology & Physiology, Northwestern University, Evanston, IL

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

10:00 AM - 12:00 PM

SYMPOSIUM: III. Mechanisms of Differentiation and Migration of Progenitor Cells in the Olfactory System
Chairperson: Harriet Baker/Frank Margolis


8  10:05 AM  Wray S. Cellular & Developmental Neurobiology, NINDS, NIH, Bethesda, MD
“MOLECULAR MECHANISMS FOR DIFFERENTIATION AND MIGRATION OF PLACODALLY-DERIVED GNRH NEURONS”

9  10:30 AM  Anderson S.A., Marin O., Yun K., Long J., Garel S., Rubenstein J. Dept of Psychiatry, UCSF, San Francisco, CA
“DETERMINATION OF CELL FATE WITHIN THE TELENCEPHALON”

10  10:55 AM  Luskin M.B. Cell Biology, Emory University School of Medicine, Atlanta, GA
“FACTORS CONTROLLING THE PROLIFERATION AND DIFFERENTIATION OF THE NEURONAL PROGENITOR CELLS IN THE ROSTRAL MIGRATORY STREAM”

11  11:20 AM  Fasolo A. Dipartimento di Biologia Animale, University of Turin, Turin, Italy
“GLIAL MESHWORK AND CELL MIGRATION IN THE ROSTRAL MIGRATORY STREAM (RMS)”

This symposium was supported in part by a grant from the National Institute of Deafness and Communication Disorders.

POSTERS

Thursday Morning - 8:00 AM - 12:00 PM

IV. Bitter Taste

P1  12  AMELIORATION OF BITTERNESS AND ORAL SENSATIONS OF CHLORHEXIDINE DIGLUCONATE BY SODIUM GLUCONATE AND SODIUM PROPIONATE SALTS
Portman M.,1 McConville P.,1 Alexander S.,1 Breslin P.,2 Beauchamp G.2 1SmithKline Beecham Consumer Healthcare, Weybridge, United Kingdom; 2Monell Chemical Senses Center, Philadelphia, PA

P2  13  A RAPID AND REPRODUCIBLE METHOD TO MEASURE BITTER TASTANT ACTIVATION OF THE GUSTDUCIN/TRANSDUCIN DEPENDENT TASTE TRANSDUCTION PATHWAY
Gravina S.A., McGregor R.A. Linguagen Corp, Paramus, NJ

P3  14  TASTE MATCHING AMONG FIVE BITTER COMPOUNDS: CONTINUING STUDIES
Lindsey A.T., Breslin P.A. Monell Chemical Senses Center, Philadelphia, PA
P4 15 THE EFFECTS OF IXTH NERVE TRANSECTION ON SHORT-TERM TASTE RESPONSES TO BITTER-TASTING STIMULI IN INBRED AND CONGENIC MICE
Nduamnu O.,1,2 St. John S.J.,1 Smith D.V.,1 Boughead J.D.1 1Anatomy & Neurobiology, University of Maryland School of Medicine, Baltimore, MD; 2University of Maryland Baltimore County, Baltimore, MD

P5 16 IMPACT OF CHLORHEXIDINE ON HUMAN BITTER TASTE PERCEPTION
Tharp C.D., Breslin P.A. Monell Chemical Senses Center, Philadelphia, PA

P6 17 RATS CANNOT BE TRAINED TO DISCRIMINATE QUININE HYDROCHLORIDE FROM DENATURATION BENZOATE
Kopka S.L., Spector A.C. Department of Psychology, Center for Taste and Smell, University of Florida, Gainesville, FL

P7 18 BITTER TASTE TRANSDUCTION INVOLVES CALCIUM INFLUX AS WELL AS CALCIUM RELEASE FROM INTRACELLULAR STORES
Ogura T.,1 Margolinske R.F.,2 Kinnamon S.C.1,3 1Department of Anatomy & Neurobiology, Colorado State University, Fort Collins, CO; 2Howard Hughes Medical Institute, Mount Sinai School of Medicine, New York, NY; 3The Rocky Mountain Taste and Smell Center, University Colorado Health Sciences Center, Denver, CO

P8 19 TASTE CELLS THAT DISCRIMINATE BITTER STIMULI
Caicedo A., Roper S.D. Physiol and Biophys, U Miami, Miami, FL

V. Hedonics

P9 20 ODOR HEDONICS VERSUS ODOR INTENSITY
Radil T.,1,2 Wysoki C.S.2 1Institute of Physiology, Czech Academy of Sciences, Prague, Czech Republic; 2Monell Chemical Senses Center, Philadelphia, PA

P10 21 SENSORY ACCEPTABILITY AND SWEET TASTE QUALITY OF SOFT DRINKS
Roozen J.P. Agrotechnology and Food Science, Wageningen University, Wageningen, Netherlands

P11 22 DIFFERENCES IN JUDGMENT OF UNPLEASANT VS. PLEASANT ODORS
Bensaif M.,1 Rouby C.,1 Farget V.,1 Vigouroux M.,1 Holley A.1,2 1Neurosciences et Systemes Sensoriels, CNRS UMR 5020 and Universite Claude Bernard Lyon, Villeurbanne, France; 2Centre Européen des Sciences du Goût, CNRS, Dijon, France

P12 23 FLAVOR EXPERIENCES DURING FORMULA FEEDING ARE RELATED TO CHILDHOOD PREFERENCES
Garcia P., Simon D., Beauchamp H.K., Mennella J. Monell Chemical Senses Center, Philadelphia, PA

P13 24 EFFECT OF DELIVERY ON THE HEDONICS OF COMMON ODORS AND ANODERONE
Stasney K.,1 Temmel A.F.,1 Quint C.,1 Tschuguel W.2 1ENT, University of Vienna, Vienna, Austria; 2Oth & Oyn, University of Vienna, Vienna, Austria

P14 25 VOLATILES IN THE ENVIRONMENT: PERCEPTION OF GASOLINE ODORS
Opiekun R.E.1,2 Kelly-Nei K.,2 Knasko S.,2 Liopy P.,2 Fiedler H.1 1Monell Chemical Senses Center, Philadelphia, PA; 2Environmental and Occupational Health Sciences Institute, Piscataway, NJ; 3Unilever Research, Edgewater, NJ

P15 26 FOOD AVERSIONS, FOOD NEOPHOBIA, AND DISGUST: INTERRELATIONS AND GENDER DIFFERENCES
Broman D.A., Nyren M., Nordin S. Department of Psychology, Umed University, Umed, Sweden

P16 27 GENETIC VARIATION IN TASTE: ASSOCIATIONS WITH CREAMY SENSATIONS, PREFERENCE FOR AND INTAKE OF HIGH FAT FOODS
Phillips M.N.,1 Bartoshuk L.M.,1 Peterson J.M.,1 Duffy V.B.1,2 1Allied Health, Univ. of Connecticut, Storrs, CT; 2Surgery, Yale Univ. School of Medicine, New Haven, CT

P17 28 LIFE-SPAN DEVELOPMENT IN ODOR PERCEPTION: HEDONICS, EDIBILITY AND NAMING
Nordin S.,1 Lundborg C.2 1Department of Psychology, Umed University, Umed, Sweden; 2Center for Smell and Taste Studies, Göteborg University, Gothenburg, Sweden

P18 29 ODOR REINFORCEMENT OF NON-NUTRITIVE SUCKING IN PRETERM INFANTS
Bingham P.M.,1 Sivieri E.M.,2 Abbsa S.,2 Finnegan K.,2 Mennella J.A.3 1Neurology/Pediatrics, University of Vermont, Burlington, VT; 2Section of Newborn Medicine, Pennsylvania Hospital, Philadelphia, PA; 3Monell Chemical Senses Center, Philadelphia, PA

P19 30 FLAVOR PREFERENCES DURING CHILDHOOD
Lien D.G., Mennella J.A. Monell Chemical Senses Center, Philadelphia, PA

P20 31 AMELIORATING AGRICULTURAL ODORS: SENSORY AND ANALYTICAL APPROACHES
Wysoki C.S.1,2 Preti G.,1,2 Pitcher P.,2 Parsons T.,2 Connolly L.,1 Louie J.,1 Kim J.J.1 1Monell Chemical Senses Center, Philadelphia, PA; 2Sch Vet Med, Univ of Penn, Philadelphia, PA; 3Sch Med, Univ of Penn, Philadelphia, PA

P21 32 IMPAIRMENT OF ODOR HEDONICS IN MALE PATIENTS WITH SCHIZOPHRENIA
Moberg P.J., Turetsky B.L., Louren B.L., Doty R.L., Gur R.C., Gur R.E. Psychiatry/Otorhinolaryngology: Head & Neck Surgery, University of Pennsylvania School of Medicine, Philadelphia, PA
VI. Spatial and Temporal Processing in Olfaction

P31  33  STATISTICAL METHOD FOR DETECTING THE ACTIVITY CHANGES OF SPONTANEOUSLY ACTIVE OLFACTORY NEURONS
Blejec A. National Institute of Biology, Ljubljana, Slovenia

P32  34  A MODEL OF NETWORK INTERACTIONS IN THE OLFACTORY BULB
Davison A.P.,1 Feng J.1 1Section of Neurobiology, Yale University School of Medicine, New Haven, CT; 2School of Cognitive and Computing Sciences, University of Sussex, Brighton, United Kingdom

P33  35  IMAGING OF SPATIALLY AND TEMPORALLY DISTRIBUTED ACTIVITY IN THE MOUSE OLFACTORY BULB
Alkasab T.K., Mitin T., Marchand I.D., White J., Kaiser I.S. Department of Neuroscience, Tufts University School of Medicine, Boston, MA

P34  36  SPATIAL REPRESENTATION OF SMALL-MOLECULE ODORANTS IN THE RAT OLFACTORY BULB
Ho S.L., Johnson B.A., Leon M. Department of Neurobiology and Behavior, University of California, Irvine, Irvine, CA

P35  37  ODORANT-INDUCED PERIPHERAL WAVES MODULATE OLFACTORY BULBAR ACTIVITY
Nikonov A.A., Parker J.M., Caprio J. Biological Sciences, Louisiana State University, Baton Rouge, LA

P36  38  POLYAMINES AS OLFACTORY STIMULI IN GOLDFISH
Rolen S.H.,1 Finckehner S.M.,1 Poling K.,1 Mattson D.,1 Sorensen P.W.,2 Caprio J.1 1Biological Sciences, Louisiana State University, Baton Rouge, LA; 2Fisheries & Wildlife, University of Minnesota, St. Paul, MN

P37  39  CALCULUM IMAGING OF ODOR-EVOKED INPUT TO THE MOUSE OLFATORY BULB
Wachowiak M.,1,2 Cohen L.B.1,2 1C&M Physiol., Yale University, New Haven, CT; 2Marine Biological Laboratory, Woods Hole, MA

P38  40  THE GOLDFISH OLFATORY BULB ENCODES PHEROMONE INFORMATION USING AT LEAST TWO SPATIAL MAPS
Masterman R., Hanson L.R., Sorensen P.W. Fisheries & Wildlife, U of MN, St. Paul, MN

P39  41  CHANGES IN SPATIO-TEMPORAL PROPERTIES OF ODOR RESPONSES FROM MULTIPLE ODOR PRESENTATIONS IN THE TURTLE BULB
Zochowski M., Cohen L., Wachowiak M. Department of C&M Physiology, Yale University School of Medicine, New Haven, CT

P40  42  ZONAL EXPRESSION PATTERNS OF OLFACTORY RECEPTORS IN SALAMANDER EPITHELIUM USING GENE SPECIFIC PROBES
Marchand J.E.,1,2 Yang X.,1 Kaiser I.S.1 1Anesthesia Research, Tufts University School of Medicine, Boston, MA; 2Anesthesiology, New England Medical Center, Boston, MA

P41  43  SENSOR RESPONSE KINETICS AS A BASIS FOR CHEMICAL RECOGNITION IN AN ARTIFICIAL OLFACTORY SYSTEM
White J., Kaiser I.S. Neuroscience, Tufts Medical School, Boston, MA

P42  44  FAILURE TO SEE LARGE PERIPHERAL WAVES DRIVING OLFACTORY BULB OSCILLATIONS IN THE RAT
Scott J.W., Sherrill L. Department of Cell Biology, Emory University, Atlanta, GA

VII. Trigeminal Nerve

P43  45  TRIGEMINAL DETECTABILITY OF SINGLE CHEMICALS AND MIXTURES
Cometto-Muniz J.E.,1 Cain W.S.,1 Abraham M.H.,2 Gola J.M.,2 1Chemosensory Perception Laboratory, Surgery (Otolaryngology), University of California-San Diego, La Jolla, CA; 2Chemistry, University College London, London, United Kingdom

P44  46  ORBITAL REFLEX AS INDEX OF NASAL IRRITATION
Jalowycki A.A.,1 Johnson B.N.,2 Wise P.M.,1 Schmid-Schönbein G.W.,1 Cain W.S.1 1Chemosensory Perception Lab, Surgery (Otolaryngology), UCSD, La Jolla, CA; 2Bioengineering, UCSD, La Jolla, CA

P45  47  NICOTINIC EXCITATION OF NOCICEPTIVE NEURONS IN TRIGEMINAL SUBNUCLEUS CAUDALIS (VC): DESENSITIZATION AND CROSS-DESENSITIZATION OF RESPONSES TO STRONG ACIDS AND SALTS
Sudo S., Sudo M., Carstens E. Neurobiology, Physiology & Behavior, UC Davis, Davis, CA

P46  48  ANIMAL MODEL OF ORAL IRRITATION
Gogineni A.G., Simons C.T., Carstens E. Neurobio, Phys & Beh, UC, Davis, CA

P47  49  COMPARISON OF NSAID ORO-SENSORY PROFILES: EVIDENCE FOR A PHENYLPROPANOIC ACID PATHWAY AND A MEFENAMYC ACID VANILLOID-LIKE PATHWAY
Belanger M.A., Breslin P.A. Monell Chemical Senses Center, Philadelphia, PA

P48  50  THE EFFECTS OF ACETAZOLAMIDE ON TRIGEMINAL SENSITIVITY TO NICOTINE AND CARBON DIOXIDE
Almohammadi H., Silver W.L. Biology, Wake Forest University, Winston-Salem, NC
P49 51 EFFECT OF TETRACAINE APPLIED INTRANASALLY ON OLFACTORY FUNCTION
Welge-Luessen A.C.,1 Wolf S.,2 Wille C.,1 Kobal G.1 1Experimental Pharmacology, University of Erlangen, Erlangen, Germany; 2Otornholaryngology, University of Erlangen, Erlangen, Germany

P50 52 COMPARISON OF SENSORY EFFECTS OF NICOTINE IN HUMANS FOLLOWING BOTH NASAL STIMULATION AND CIGARETTE SMOKING
Kaegler M.,1 Renner B.,2 Thurauf N.,1 Kobal G.,2 Gulletta F.1 1INIBIFO GmbH, Cologne, Germany; 2University of Erlangen, Germany; 3Philip Morris USA, Richmond, VA

P51 53 THE NEGATIVE MUCOSAL POTENTIAL (NMP) DETECTS SMALL VARIATIONS IN STIMULUS CONCENTRATION
Thurauf N.,1 Günther M.,2 Kornhuber J.,1 Kobal G.1 1Department of Psychiatry, University of Erlangen-Nürnberg, Erlangen, Germany; 2Department of Surgery, University of Regensburg, Regensburg, Germany; 3Department of Pharmacology, University of Erlangen-Nürnberg, Erlangen, Germany

P52 54 SOLITARY CHEMORECEPTOR CELLS IN THE NASAL RESPIRATORY EPITHELIUM OF RATS AND MICE
Bottig l, B. Hansen A., Finger T.E. Rocky Mountain Taste & Smell Center, University of Colorado Health Sciences Center, Denver, CO

P53 55 SENSITIVITY OF CULTURED TRIGEMINAL NEURONS TO ACIDIC PH AND INNOCUOUS COOLING
Bryant B.P. Monell Chemical Senses Center, Philadelphia, PA

P54 56 INCREASES IN INTRACELLULAR CALCIUM TO BOTH METHYL ANTHRANILATE AND CAPSAICIN IN CULTURED CHICK TRIGEMINAL NEURONS
Kirimides M.L., Kumellas M.P., Bryant B.P. Monell Chemical Senses Center, Philadelphia, PA

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

NIH Workshop Funding Opportunities for the New Investigator 3:30-5:00 (Salon E & F)

Junior Investigator Cookout 5:00-7:00 (Outdoors)
X. Aging

P1  65 PREVALENCE OF OLFACTORY IMPAIRMENT IN THE YOUNG OLD AND THE OLDEST OLD: RESULTS OF AN EPIDEMIOLOGICAL STUDY
Murphy C., 1 Schubert C., 2 Cruickshanks K.J. 2 1Psychology, SDSU/UCSD Joint Program, San Diego, CA; 2Ophthalmology and Visual Sciences, University of Wisconsin Medical School, Madison, WI

P2  66 REDUCTION OF BRAIN ACTIVATION IN OLD SUBJECTS IN RESPONSE TO ODORANTS DELIVERED IN AQUEOUS SOLUTIONS TO THE MOUTH
Cerf-Ducaetel B., Ferdon S., Urich K., Murphy C. Psychology, San Diego State University, University of California Medical Center, San Diego, CA

P3  67 THE INFLUENCE OF AGING ON OLFACTORY QUALITY PERCEPTION
Newlon J.W., 1 Kurtz D.B., 1 Hornung D.E. 1,2 1Neuroscience and Physiology, Upstate Medical U, Syracuse, NY; 2Biology, St. Lawrence U, Canton, NY

P4  68 AGE-RELATED CHANGES IN GENE EXPRESSION IN THE OLFACTORY MUCOSA
Robinson A.M., Conley D.B., Kern R.C. Otolaryngology, Northwestern University, Chicago, IL

P5  69 SENSORY AND COGNITIVE PREDICTORS OF ODOR IDENTIFICATION IN YOUNG AND OLD AGE
Larsson M., 1 Öberg C., 2 Bäckman L. 1,2 1Department of Psychology, Stockholm University, Stockholm, Sweden; 2Neurotec, Karolinska Institute, Stockholm, Sweden; 2Department of Psychology, Uppsala University, Uppsala, Sweden

P6  70 A COMPARATIVE STUDY OF THE AGING MOUSE OLFACTORY BULB
Mirich J.M., Williams N.C., Berlau D.J., Brunjes P.C. Psychology, University of Virginia, Charlottesville, VA

P7  71 FOOD PREFERENCES VARY WITH AGE AND SEX: A NEW ANALYSIS USING THE GENERAL LABELED MAGNITUDE SCALE
Snyder D.J., 1 Duffy V.B., 1 Fast K., 1 Hoffman H.J., 2 Ko C.W., 2 Weiffenbach J.M., 4 Bartoshuk L.M. 1Surgery, Yale Univ. School of Medicine, New Haven, CT; 2Allied Health, Univ. of Connecticut, Storrs, CT; 2NIDCD, Bethesda, MD; 2NIDR, Bethesda, MD

P8  72 THE EFFECT OF AGE ON SNIFFING BEHAVIOR, TASK COMPLETION TIME, AND THE ABILITY TO SELF-IDENTIFY SMELL LOSS
Reinhard T., Dulay M.F., Frank R., Gesteland R. Psychology, University of Cincinnati, Cincinnati, OH

P9  73 AGING AND BODY ODOR
Osada K., 1,2 Yamazaki K., 1 Curran M., 1 Beauchamp G.K. 1 1Monell Chemical Senses Center, Philadelphia, PA; 2Taisho Pharm.CO.LTD., Omiya, Japan

XI. Assessment of Discrimination and Sensitivity

P10  74 DIFFERENCES IN OLFACTORY ACTIVATION IN REGIONS OF INTEREST IN THE CEREBELLUM OF THE YOUNG AND ELDERLY DETECTED WITH FMRI
Ferdon S., 1 Wiser A., 1 Cerf-Ducaetel B., 1 Murphy C. 1,2 1San Diego State University, San Diego, CA; 2University of California Medical Center, San Diego, CA

P11  75 COMPOUND-SPECIFIC INDUCTION OF EXTREME SENSITIVITY TO ODORS IN FERTILE WOMEN
Dalton P., Doolittle N., Breslin P.A. Monell Chemical Senses Center, Philadelphia, PA

P12  76 SNIFF MAGNITUDE AS A CLINICAL MEASURE OF OLFACTORY ACUITY: A COMPARISON TO THRESHOLDS, THE UPSIT AND THE ALCOHOL SNIFF TEST
Dulay M.F., Reinhard T., Gesteland R., Frank R. Psychology, University of Cincinnati, Cincinnati, OH

P13  77 ODOR DETECTABILITY EXPLICITLY DEFINED AND MEASURED
Walker J.C., 1 Kendall-Reed M., 1 Walker D.B., 1 Hall S.B., 2 Niu X. 1 1Sensory Research Institute, Florida State University, Tallahassee, FL; 2Dept. of Statistics, Florida State University, Tallahassee, FL

P14  78 “MICROSOMATIC” PRIMATES REVISITED: OLFACTORY SENSITIVITY IN SQUIRREL MONKEYS AND PIGTAIL MACAQUES
Laska M., Seibt A. Dep. of Medical Psychology, University of Munich, Munich, Germany

P15  79 DIFFERENCE OF AN INDIVIDUAL COMPONENT CONTRIBUTION TO THE INTENSITY OF ODOR IN A MIXTURE
Chida M., Sone Y., Nagata H., Monobe T., Shikata H. Japan Tobacco Inc., Yokohama, Japan

P16  80 ARE TWO NOSTRILS BETTER THAN ONE?
Frasnelli J.F., 1,2 Livermore A., 2,3 Soiffer A., 1 Hummel T. 1 1ENT, University Vienna, Vienna, Austria; 2ENT, Dresden Medical School, Dresden, Germany; 3School of Social Sciences and Liberal Studies, Charles Sturt University, Bathurst, Australia; 2Smell and Taste Center, University of Pennsylvania, Philadelphia, PA

P17  81 MALODOR SNIFF WAVEFORM VARIATIONS AMONG SUBJECTS
Gesteland R., 1,2 Dulay M., 2 Reinhard T., 2 Frank R. 1 1Emerging Concepts Inc, Cincinnati, OH; 2Univ of Cincinnati, Cincinnati, OH

P18  82 EVIDENCE FOR LEFT-RIGHT DIFFERENCES IN ODOR DISCRIMINATION, BUT NOT IN SHORT-TERM ODOR MEMORY
Hahm A.K., Mehra S., Connelly T., Doby R.L. Smell & Taste Center, University of Pennsylvania, Philadelphia, PA
P19 83 Olfactory Learning in Young Rats: Detection, Discrimination and Acquisition of a Reversal Learning Set
Salem, J. N., McBride K.M. 1,2 Dept. of Psychology, American University, Washington, DC; 2Laboratory of Membrane Biochemistry and Biophysics, National Institute on Alcohol Abuse and Alcoholism, National Institutes of Health, Rockville, MD

P20 84 Affects of the Herbicide Metolachlor on Perception of Chemical Stimuli by Crayfish, Orconectes Rusticus
Wolfe M.C., Moore A.E. Laboratory for Sensory Ecology, J.P. Scott Center for Neuroscience, Mind and Behavior, Bowling Green State University, Bowling Green, OH

P21 85 Smell of Marijuana as Probable Cause
Hastings L., Doty R.L. Otorhinolaryngology, University of Pennsylvania, Philadelphia, PA

P22 86 Generalization of Conditioned Feeding Response to Odors Reveals Overlapping Odor Representations in the MOTH, Manduca sexta
Daly K.C., Chandra S., Smith B. Entomology, Ohio State University, Columbus, OH

XII. Cellular Differentiation in Development

P31 87 A Comparative Immunocytochemical Study of the Rat Vomeronasal System in Development and Regeneration After Nerve Transection
Matsuoka M., Osada T., Yoshida-Matsuoka J., Ikai A., Norita M., Costanzo R.M., Ichikawa M. 1,5 Department of Neurobiology and Anatomy, Niigata University School of Medicine, Niigata, Japan; 2Department of Life Science, Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, Yokohama, Japan; 3Department of Developmental Morphology, Tokyo Metropolitan Institute for Neuroscience, Fuchu, Japan; 4CREST, Kawaguchi, Japan; 5Department of Physiology, Virginia Commonwealth University, Richmond, VA

P32 88 Neurogenesis of Rat Vomeronasal Neurons in Vitro
Osada T., Ikai A., Takigami S., Ichikawa M. 1,5 Life Science, Tokyo Institute of Technology, Yokohama, Japan; 2Anatomy and Embryology, Tokyo Metropolitan Institute for Neuroscience, Tokyo, Japan; 3CREST, Japan Science and Technology Corporation, Tokyo, Japan

P33 89 Limits and Potential of Basal Cell Transplantation
Chen X., Murrell J.R., Hunter D.D., Schwob J.E. Anatomy & Cellular Biology, and

P34 90 Developmental Changes of Serotonin Receptor 5-HT3 Subunit mRNAs in the Rat Olfactory Epithelium: Involvement in Neurogenesis?
Lobitz N., Weiler E., Wetzel C.H., Hatt H. Cell Physiology, Neurophysiology, Ruhr-Univ., Bochum, Germany

P35 91 Functional Analysis of Xdll3 in Olfactory System Development
Cox J.T., Sanderson B.M., Burd G.D. Molecular and Cellular Biology, University of Arizona, Tucson, AZ

P36 92 Transcripts Enriched in the Proliferation Zone of the Lobster Olfactory Organ
Stoss T.D., Derby C.D., McClinton T.S. 1 Physiology, University of Kentucky, Lexington, KY; 2Biology, Georgia State University, Atlanta, GA

P37 93 Cell Dynamics in the Septal Organ of Masera
Weiler E., Farbman A.I. Neurobiology & Physiology, Northwestern University, Evanston, IL

P38 94 Genes Up-regulated at Metamorphosis in Xenopus Laevis Nasal Capsules
Walworth E.S., Burd G.D. Molecular and Cellular Biology, University of Arizona, Tucson, AZ

P39 95 Vitamin A Deficiency Leads to Increased Cell Proliferation in Olfactory Epithelium of Mature Rats
Savchenko V., Zeng M., McKenna J., Asson-Batres M.A. 1 Cell Biology, Vanderbilt University, Nashville, TN; 2Biological Sciences, Tennessee State University, Nashville, TN

XIII. Recognition by Chemosensory Signals

P40 96 Is Chin-Marking in the Rabbit Mediated by the Accessory Olfactory System?
Hudson R., Arteaga M.L., Perez E., Martinez-Gomez M., Lucio R.A. 2 National University of Mexico, Mexico D.F., Mexico; 3Autonomous University of Tlaxcala, Tlaxcala, Mexico

P41 97 Attraction of Conspecifics to Molted Odor Signals in Crayfish (Orconectes Rusticus)
Adams J.A., Moore P.A. Biological Sciences, Bowling Green State University,
PREDATOR ODORS AND REPRODUCTION IN RODENTS
Voznesenskaya V.1 Naidenko S.1 Feoktistova N.1 Miller L.2 Clark L.2 1Institute of Ecology & Evolution, Moscow 117071, Russian Federation; 2National Wildlife Research Center, Fort Collins, CO

MOLECULAR ANALYSIS OF OLFCTION AND HOST PREFERENCE IN THE MALARIA VECTOR MOSQUITO ANOPHELES GAMBAE
Merrill C.E., Fox A.N., Pitts R.J., Zwibel L.J. Department of Biological Sciences, Vanderbilt University, Nashville, TN

PRELIMINARY EVIDENCE FOR CANINE OLFATORY DETECTION OF MELANOMA
Pickel D.P.1 Cognetta A.B.2 Manuey G.P.3 Walker D.B.4 Hall S.B.3 Walker J.C.6 1YONPICKEL K-9 Inc, Tallahassee, FL; 2Dept. of Dermatology, University of Florida, Gainesville, FL; 3Morninglo Goldens, Tallahassee, FL; 4Sensory Research Institute, Florida State University, Tallahassee, FL; 5Dept. of Statistics, Florida State University, Tallahassee, FL

REMOVAL OF THE VOMERONASAL ORGAN DOES NOT DISRUPT RECOGNITION OF MHC-DETERMINED INDIVIDUAL ODOR TYPE

ELECTROPHYSIOLOGICAL INVESTIGATION OF THE CARBON DIOXIDE SENSITIVITY IN THE BITING MIDGE
Grant A.J.1 Kline D.L.2 1American Biophysics, East Greenwich, RI; 2USDA, Gainesville, FL

A BEHAVIORAL PARADIGM FOR STUDYING OLFATORY INDIVIDUAL RECOGNITION IN GOLDEN HAMSTERS
Lai W.S., Johnston R.E. Psychology Department, Cornell University, Ithaca, NY

WINNER AND LOSER EFFECTS ARE DEPENDENT UPON OLFACTION IN CRAYFISH (ORCONETES RUSTICUS)
Bergman D.A., Moore P.A. Laboratory for Sensory Ecology and J.P. Scott Center for Neuroscience, Mind and Behavior, Bowling Green State University, Bowling Green, OH

KIN RECOGNITION BY ODORS IN GOLDEN HAMSTERS
Johnston R.E. Psychology, Cornell University, Ithaca, NY

EVALUATION OF T2R1 AS A CANDIDATE GENE FOR THE PTC/PROP TASTE POLYMORPHISM
Reed D.R.,1 Chen Z.,1 Duffy V.B.,2 Bartoshek L.M.3 1Monell Chemical Senses Center, Philadelphia, PA; 2Allied Health, University of Connecticut, Storrs, CT; 3School of Medicine, Yale University, New Haven, CT

CLONING AND EXPRESSION OF ASIC1 FROM HUMAN FUNGIFORM PAPILLAE
Huque T.,1 Nguyen N.D.,1 Puchalski R.B.,1 Spielman A.I.,1,2 Brezilians P.A.,1 Mackler S.A.,1 Brand J.G.1,2 1Monell Center, Philadelphia, PA; 2NYU Coll. Dentistry, NY, NY; 3U. Penn & YAMC, Philadelphia, PA

UPTAKE OF AMPHIPATHIC TASTANTS BY TASTE CELLS
Rodin S., Shaul M., Nir S., Naim M. The Hebrew University of Jerusalem, PO Box 12, Rehovot, Israel

IDENTIFICATION AND EXPRESSION OF CANDIDATE TASTE-RECEPTORS IN DROSOPHILA
Dunipace L., Meister S., Amrein H. Genetics, Duke University, Durham, NC

A COMPARISON OF SODIUM CHLORIDE TASTE DETECTION IN C57BL/6J AND DBA/2J MICE
Eylam S., Specter A.C. Dept. of Psychology and Center for Smell and Taste, Univ. of Florida, Gainesville, FL

MOLECULAR ORIGINS OF THE SWEET TOOTH: A NOVEL TASTE RECEPTOR CONTROLLING THE AVIDITY FOR SUCROSE AND SACCHARIN IN MICE
Li X.,1 Bachmanov A.A.1, Reed D.R.,1 Li S.,1 Chen Z.,1 Tordoff M.G.,1 Beauchamp G.K.1,2 de Jong P.J.,14 Wu C.,1 West D.B.1,5 Chatterjee A.,1 Ross D.A.,1 Ohmen J.D.1 1Monell Chemical Senses Center, Philadelphia, PA; 2University of Pennsylvania, Philadelphia, PA; 3Children’s Hospital Oakland Research Institute,
GPI ANCHORED PROTEINS IN THE CHEMRESPONSE OF PARAMECIUM TO FOLATE
Yano Y.,1 Hruska M.,1 Garner K.,1 Rakochy V.,1 Tweten R.,1 Van Houten J.J.1
1Biology, University of Vermont, Burlington, VT; 2University of Oklahoma, Oklahoma City, OK

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

10:00 AM - 12:00 PM SYMPOSIUM: XV. Functional Genomics in Neural Systems
Chairperson: Tim McClintock

113 10:00 AM McClintock T.S.
Department of Physiology, University of Kentucky, Lexington, KY
“HIGH-THROUGHPUT ANALYSIS OF MRNA ABUNDANCE”

114 10:10 AM Geschwind D.
Department of Neurology, UCLA School of Medicine, Los Angeles, CA
“DNA MICROARRAYS FOR NEURODEVELOPMENTAL GENE DISCOVERY—CLONE CHOICE, ANALYTICAL PATHWAYS AND DOWNSSTREAM CONFIRMATION”

115 11:00 AM Prolla T.
Departments of Genetics and Medical Genetics, University of Wisconsin-Madison, Madison, WI
“THE GENE EXPRESSION PROFILE OF THE AGING PROCESS AND ITS RETARDATION BY CALORIC RESTRICTION”

This symposium was supported in part by a grant from the National Institute of Deafness and Communication Disorders and by Affymetrix Corporation.

XVI. Cognitive and Mood Effects in Olfaction

P1 116 EFFECTS OF OBSERVER NEGATIVE AFFECTIVITY ON PERCEIVED STRESS AND HEALTH SYMPTOMS TO AN AMBIGUOUS ODOR EXPOSURE
Mauze C., Dalton P., Swee M. Monell Chemical Senses Center, Philadelphia, PA

P2 117 OLFATORY FUNCTIONING AND COGNITIVE ABILITIES: A TWIN STUDY
Finkel D.,1 Pedersen N.L.,2 Larsson M.3,4 1Division of Social Sciences, Indiana University Southeast, Indiana, IN; 2Department of Medical Epidemiology, Karolinska Institute, Stockholm, Sweden; 3Department of Psychology, University of Southern California, Los Angeles, CA; 4Department of Psychology, Stockholm University, Stockholm, Sweden

P3 118 IS THERE PERCEPTUAL PRIMING IN OLFATORY MEMORY?

Olsson M.J., Faxbrink M., Jönsson F.U. Psychology, Uppsala University, Uppsala, Sweden

P4 119 METACOGNITIVE ASPECTS ON ODOR KNOWLEDGE
Jönsson F.U., Olsson M.J. Psychology, Uppsala University, Uppsala, Sweden

P5 120 PSYCHOLOGICAL EFFECTS OF 250μM ANDROSTADIENONE: MOOD, STATE AND TRAIT ANXIETY
Lundström J.N., Goncalves M., Olsson M.J. Psychology, Uppsala University, Uppsala, Sweden

P6 121 ODOR IDENTIFICATION AND DISCRIMINATION: INFLUENCE OF CULTURE AND TYPICALITY ON PERFORMANCE
Thomas-dangui T.,1 Rouby C.,1 Sicard G.,1 Vigouroux M.,1 Johansson A.,2 Bengtson A.,2 Hall G.,2 Omell W.3 1Neurosciences et Systèmes Sensoriels, CNRS UMR 5020 et Université Claude Bernard Lyon I, Villeurbanne Cedex, France; 2The Swedish Institute for Food and Biotechnology, SIK, Gothenburg, Sweden; 3Division of Human Nutrition and Epidemiology, Wageningen agricultural University, Wageningen, Netherlands

P7 122 ODOR IMAGERY AND DETECTION OF PERI-THRESHOLD ODORS
Djordjevic J., Jones-Gotman M., Petrides M., Zatorre R. Psychology, Montreal Neurological Institute, Montreal, PQ, Canada

P8 123 EPISODIC ODOR RECOGNITION – THE INFLUENCE OF SUBJECTIVE ODOR EXPERIENCE
Öberg C.,1 Larsson M.2, Bäckman L.3 1Department of Psychology, Uppsala University, Uppsala, Sweden; 2Department of Psychology, Stockholm University, Stockholm, Sweden; 3Neurotec, Karolinska Institute, Stockholm, Sweden

P9 124 THE EFFECT OF TASK REQUIREMENTS ON P300 HABITUATION IN THE OLFATORY EVENT-RELATED POTENTIAL (OERP)
Calhoun-Haney R.,1 Murphy C.1,2 1Joint Doctoral Program in Clinical Psychology, SDSU/UUD, San Diego, CA; 2UC San Diego Medical Center, San Diego, CA

P10 125 INFLUENCE OF ODORANT EXPOSURE ON REMEMBERED ODORANT QUALITY
Kurtz D.B.,1 White T.L.,1 Hornung D.E.2,3 1Neuroscience and Physiology, SUNY UMU, Syracuse, NY; 2Biologit, St. Lawrence U, Canton, NY

P11 126 HUMAN OLFATORY DISCRIMINATION BETWEEN NEUTRAL AND EMOTIONAL STATES
Chen D., McClintock M.K. Institute for Mind & Biology, University of Chicago, Chicago, IL

P12 127 THE EFFECTS OF HEMISPHERIC LATERALISATION OF ODOR PROCESSING ON TASK PERFORMANCE AND MOOD

Friday, April 27, 2001
XVII. Modulation of Chemosensory Systems

P13  128  CAPSAICIN MODULATES VOLTAGE-GATED NA, K, AND CA CHANNELS  
Liu L., Simon S.A.  Neurobiology, Duke University, Durham, NC

P14  129  EPHAPTIC INTERACTIONS IN THE MAMMALIAN OLFACTORY SYSTEM  
Bokil H., Laariz M., Blinder K., Ennis M., Keller A.  Anatomy & Neurobiology, University of Maryland School of Medicine, Baltimore, MD

P15  130  DIRECT EVIDENCE FOR THE PRESENCE OF A CA2+ DEPENDENT K+ CHANNEL IN OLFACTORY CILIA  
Delgado R., Saavedra V., Sierraita J., Bacigalupo J.  Department of Biology, Faculty of Sciences and Millennium Institute for Advanced Studies in Cell Biology and Biotechnology, University of Chile, Santiago, Chile

P16  131  PONTINE GUSTATORY PROCESSING: MODULATION BY DIFFERENT SOURCES OF CENTRIFUGAL INPUT  
Lundy Jr. R.F., Norgren R.  Behavioral Science, Penn State College of Medicine, Hershey, PA

P17  132  NEURAL ACTIVITY IS MODULATED BY METABOTROPIC GLUTAMATE RECEPTORS IN RAT OLFACTORY BULB SLICES  
Heinboel T., Hayar A., Heyward P.M., Shipley M.T., Ennis M.  Anatomy & Neurobiology, Univ. of Maryland, Baltimore, MD

P18  133  BRAIN-DERIVED NEUROTROPHIC FACTOR (BDNF) MODULATES ELECTRICAL PROPERTIES OF OLFACTORY BULB NEURONS  
Tucker K., Fadool D.A.  Prog In Neurosci & Mol Biophys, Florida State University, Tallahassee, FL

P19  134  PHYSIOLOGICAL ACTIONS OF CHOLECYSTOKININ ON RAT TASTE RECEPTOR CELLS  
Zhao F.L., Lu S.G., Herness S.  Oral Biology, Ohio State University, Columbus, OH

P20  135  TASTE-RESPONSIVE NEURONS IN THE HAMSTER SOLITARY NUCLEUS ARE MODULATED BY THE LATERAL HYPOTHALAMUS  
Cho Y.K., Li C.S., Smith D.V.  Anatomy & Neurobiology, University of Maryland School of Medicine, Baltimore, MD

P21  136  INFLUENCE OF THE AMYGDALA ON TASTE NEURONS IN THE SOLITARY NUCLEUS OF THE HAMSTER  
Li C.S., Cho Y.K., Smith D.V.  Anatomy & Neurobiology, University of Maryland School of Medicine, Baltimore, MD

P22  137  ZINC HAS EXTRACELLULAR AND INTRACELLULAR EFFECTS ON RAT OLFACTORY BULB GLYCINE RECEPTORS

XVIII. Psychophysics

P31  139  THE QUALITY CLASSIFICATION OF ODORS IN A 3D OLFACTORY SPACE  
Laffort P., Héricourt P., Valentin D., Callegari P.  Centre des Sciences du Goût, CNRS, Dijon, France; ENSBANA, University of Bourgogne, Dijon, France

P32  140  A HIGH-THROUGHPUT METHOD FOR ASSESSING TASTE FUNCTION IN INDIVIDUAL MICE  
Gressack J., Guerassim S., Spector A.S., Glendinning J.I.  Biological Science, Barnard College, New York, NY; Psychology, University of Florida, Gainesville, FL

P33  141  A PAPER TEST FOR PROP TASTER CLASSIFICATION THAT MINIMIZES EXPOSURE TO PROP  
Zhao L., Kirkmeyer S.V., Tepper B.J.  Food Science, Rutgers Univ, New Brunswick, NJ; Int'l Flavors and Fragrances, Dayton, NJ

P34  142  MODELING THE TIME COURSE OF BURN PRODUCED BY CAPSAICIN, PIPERINE, ZINGERONE, AND MENTHOL  
Affeltranger M.A., Balaban C.D., McBurney D.H.  Departments of Psychology, University of Pittsburgh, Pittsburgh, PA; Otolaryngology, University of Pittsburgh, Pittsburgh, PA; Neurobiology, University of Pittsburgh, Pittsburgh, PA

P35  143  FUNCTIONAL MEASUREMENT OF CATEGORY AND LABELED DISSIMILARITY SCALES IN JUDGMENTS OF SWEETNESS  
Blot K.J., Stevens D.A.  Psychology, Clark University, Worcester, MA

P36  144  THE CEPHALIC PHASE SALIVARY RESPONSE: ROLES AND RELATIONS  
Mattes R.D.  Foods and Nutrition, Purdue University, W. Lafayette, IN

P37  145  REMEMBERED INTENSITIES OF TASTE AND ORAL BURN CORRELATE WITH PROP BITTERNESS  
Fast K., Green B.G., Snyder D.J., Bartoshuk L.M.  Surgery, Yale Univ Sch of Medicine, New Haven, CT; John B. Pierce Laboratory, New Haven, CT

P38  146  DO INDIVIDUAL ODOR DETECTION THRESHOLDS PREDICT SUPRATHRESHOLD SCALING DATA?  
Matovinovic E.C., Shusterman D.J.  Medicine, Univ. of Calif., San Francisco, San Francisco, CA

P39  147  GENERALIZATION OF CONDITIONED TASTE AVersions BETWEEN

Friday, April 27, 2001

Evans M.T., van Toller S.  Psychology, University of Warwick, Coventry, United Kingdom

P23  138  METHIMAZOLE ALTERS GLUTATHIONE DEPENDENT-ENZYME EXPRESSION AND ACTIVITY IN THE MOUSE OLFACTORY MUCOSA  
Etienne L.A., Maruniak J.A., Walters E.  Genetics, Howard University, Washington, DC; Biological Sciences, University of Missouri, Columbia, MO
SACCHARIN AND MONOSODIUM GLUTAMATE IN RATS
Delay E.R., Tran L.H. Neuroscience Prog., Dept. Psychology, Regis University, Denver, CO

P40 148 EFFECTS OF LABELED MAGNITUDE SCALE INSTRUCTIONS ON TASTE PERCEPTION OF NA-SACCHARIN, ACESULFAME-K AND 6N-PROPYL 2-THIOURACIL
Spasoic D.J., Horne J., Speirs W.F., Lawless H.T. Food Science, Cornell University, Ithaca, NY

P41 149 DISCRIMINATION BETWEEN THE TASTES OF N-METHYL-D-ASPARTATE AND MONOSODIUM GLUTAMATE IN RATS
Stapleton J.R., Roper S.D., Delay E.R. Neuroscience Program, Regis University, Denver, CO; Neuroscience Program, University of Miami School of Medicine, Miami, FL; Rocky Mt. Taste & Smell Center, UCHSC, Denver, CO

P42 150 ASSESSMENT OF THREE METHODS FOR PROP TASTER STATUS CLASSIFICATION
Godinot N., Rankin K.M., Christensen C.M. GSIC, International Flavors and Fragrances, Union Beach, NJ

P43 151 SELF- AND CROSS-ADAPATION AMONG FOUR ODORANTS
Wise P.M., Schmidt R., Warren C.B., Polak E.H., Cain W.S. Surgery(Otolaryngology), U.C. San Diego, La Jolla, CA

XIX. Salt Taste

P44 152 TASTE PROPERTIES OF CALCIUM SALTS AND MIXTURES
Rapacki F.M., Hayes A.D., Wang G.C., Lawless H.T. Food Science, Cornell University, Ithaca, NY; Food Science, Pennsylvania State University, University Park, PA

P45 153 THE TRANSCELLULAR TRANSDUCTION PATHWAY IS SUFFICIENT FOR NA+ RECOGNITION FOLLOWING ACUTE NA+ DEPLETION
Geran L.C., Spector A.C. Dept. of Psychology and Center for Smell and Taste, Univ. of Florida, Gainesville, FL

P46 154 EFFECTS OF CHLORHEXIDINE ON THE TASTE OF A SERIES OF SALTS
Friedberg J.R., Frank M.E., Hettinger T.P., Gent J.F. Taste and Smell Center, UConn Health Center, Farmington, CT

P47 155 NAACL THRESHOLDS: RELATIONSHIP TO ANTERIOR TONGUE LOCUS, AREA OF STIMULATION, AND NUMBER OF FUNGIFORM PAPILAE
Doty R.L., Bagla R., Morgenson M., Mirza N. Smell & Taste Center, University of Pennsylvania, Philadelphia, PA

P48 156 CETYLPYRIDINIUM CHLORIDE IS BOTH AGONIST AND ANTAGONIST OF THE RAT AMILORIDE-INSENSITIVE CHORDA TYMPANI RESPONSE TO NACL, KCL, AND NH4CL,
DeSimone J.A., Lyall V., Heck G.L., Phan T.H., Feldman G.M. Physiology, Virginia Commonwealth University, Richmond, VA; McGuire Veterans Affairs Medical Center, Richmond, VA

P49 157 SALT INTENSITY AND BEHAVIORS: ASSOCIATIONS WITH BITTERNESS OF 6-N-PROPYLTHIOURACIL
Chapo A.K., Bartoshuk L.M., Peterson J.M., Phillips M.N., Duffy V.B. Allied Health, Univ. of Connecticut, Storrs, CT; Surgery, Yale Univ. School of Medicine, New Haven, CT

P50 158 AMILORIDE-SENSITIVE COMPONENT OF THE CHORDA TYMPANI NERVE RESPONSE REDUCED BY LOW NAACL DIET IN ADULT RATS
Pittman D.W., Contreras R.J. Department of Psychology, The Florida State University, Tallahassee, FL

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

Softball Game: Taste vs. Smell 2:00-4:00 PM (Fruitville and Lockbridge Rd.)

Workshop: Receptor Classification 4:00-6:00 PM (Sarasota Room)
P. Mombaerts, coordinator

Industrial Reception 5:00-7:00 PM (Salons C & D)
P. Attar Coordinator
Sponsored by Avon Products, Inc.

SLIDES

Friday Evening - 7:00 PM - 8:00 PM

XX. Molecular Biology of Olfaction
Chairperson: Steve Munger

7:00 PM 159 OMP IS A BETA-CLAM

7:15 PM 160 WHY DO ODORANT BINDING PROTEINS BIND ODORANTS?
Lazar J., Greenwood D., Prestwich G.D., Rasmussen L.E. Medicinal Chemistry, University of Utah, Salt Lake City, UT; Hort Research, Auckland, New Zealand; Chemistry, Oregon Graduate Institute, Beaverton, OR
7:30 PM 161 ATP EVOKES CA\textsuperscript{2} INCREASES AND INWARD CURRENTS IN MOUSE OLFATORY RECEPTOR NEURONS
Hegg C.C., Lucero M.T. Physiol., Univ. of Utah, Salt Lake City, UT

7:45 PM 162 THE CYCLIC NUCLEOTIDE-GATED CHANNEL SUBUNIT OCNC2 IS ESSENTIAL FOR OLFATORY ADAPTATION
Munger S.D.,\textsuperscript{1,2} Lane A.P.,\textsuperscript{1} Zhong H.,\textsuperscript{1} Leinders-Zufall T.,\textsuperscript{1} Zufall F.,\textsuperscript{1} Reed R.R.\textsuperscript{2,3}
\textsuperscript{1}Anatomy and Neurobiology, University of Maryland Sch. Med., Baltimore, MD; \textsuperscript{2}Howard Hughes Medical Institute, Johns Hopkins Sch. Med., Baltimore, MD; \textsuperscript{3}Molecular Biology and Genetics, Johns Hopkins Sch. Med., Baltimore, MD; 
\textsuperscript{4}Neuroscience, Johns Hopkins Sch. Med., Baltimore, MD

Evening Break 7:45-8:15 PM

8:00 PM - 10:00 PM
PRESIDENTIAL SYMPOSIUM: XXI. Seeing is Believing: Imaging Cellular Function in the Chemical Senses
Chairperson: Steve Roper

163 8:00 PM
Roper S.D.
Physiology and Biophysics, and Program in Neuroscience, University of Miami School of Medicine, Miami, FL
"INTRODUCTION TO "SEEING IS BELIEVING: IMAGING CELLULAR FUNCTION IN THE CHEMICAL SENSES"

164 8:15 PM
Calecdo A.
Physiology and Biophysics, University of Miami School of Medicine, Miami, FL
"VISUALIZING RESPONSES TO NEUROTTRANSMITTERS AND TASTE STIMULI IN TASTE CELLS"

165 8:50 PM
Rubin B.
Neurobiology, Duke University, Durham, NC
"OPTICAL IMAGING OF INTRINSIC SIGNALS IN THE OLFATORY BULB"

166 9:25 PM
Sobel N.,\textsuperscript{1} Stappen L.,\textsuperscript{2} Anderson A.K.\textsuperscript{2}
\textsuperscript{1}Helen Wills Neuroscience Institute, Univ Calif Berkeley, Berkeley, CA; \textsuperscript{2}Dept. of Psychology, Stanford University, Stanford, CA
"FUNCTIONAL IMAGING OF THE HUMAN BRAIN: WHAT HAS IT TAUGHT US AND WHAT CAN IT TEACH US ABOUT OLFACTION?"

This symposium was sponsored in part by AromaSys, Inc.

XXII. Genetics and Genomics

PI 167 PERIPHERAL GUSTATORY SYSTEM IN BDNF/NT-3 DOUBLE KNOCKOUT MICE

Nosrat I.V.,\textsuperscript{1} Ageman K.,\textsuperscript{2} Gaball M.,\textsuperscript{1} Ernfors P.,\textsuperscript{2} Nosrat C.A.\textsuperscript{1} \textsuperscript{1}Biologic and Materials Sciences, Sch. Dentistry, University of Michigan, Ann Arbor, MI; \textsuperscript{2}Molecular Neurobiology, Department of Medical Biochemistry and Biophysics, Karolinska Institutet, Stockholm, Sweden

P2 168 PREPARATION AND INITIAL CHARACTERIZATION OF MICE WITH TARGETED DELETION OF THE OLFACTORY MUCOSA-SPECIFIC CYP2G1 GENE
Zhao X., Swiatek P., Collins D.N., Ding X. Wadsworth Center, NYSDOH, Albany, NY

P3 169 WHAT MAKES A SUPER-TASTER?
Bartoshuk L.M.,\textsuperscript{1} Duffy V.B.,\textsuperscript{1,2} Fast K.,\textsuperscript{1} Kveton J.F.,\textsuperscript{1} Lucchina L.A.,\textsuperscript{1} Phillips M.N.,\textsuperscript{2} Prutkin J.M.,\textsuperscript{1} Reed D.R.,\textsuperscript{1} Snyder D.J.\textsuperscript{1} \textsuperscript{1}Surgery, Yale Univ Sch of Medicine, New Haven, CT; \textsuperscript{2}Allied Health, Univ of Connecticut, Storrs, CT; \textsuperscript{3}Unleiever, Edgewater, NJ; \textsuperscript{4}Monell, Philadelphia, PA

P4 170 FUNGIFORM PAPILLES AND CIRCUMVALLATE TASTE BUDS ARE LOST IN MICE LACKING THE NEUROTROPHIN RECEPTOR p75
Krimm R.F.,\textsuperscript{1} Davis B.M.,\textsuperscript{2} Albers K.M.\textsuperscript{2,4} \textsuperscript{1}Pathology, University of Kentucky, Lexington, KY; \textsuperscript{2}Neurobiology and Anatomy, University of Kentucky, Lexington, KY

P5 171 HIGH-RESOLUTION GENETIC MAPPING OF THE MOX LOCUS
Li S., Liu X., Neira M., Beauachamp G.K., Azen E.A., Bachmanov A.A.\textsuperscript{1} \textsuperscript{1}Monell Chemical Senses Center, Philadelphia, PA; \textsuperscript{2}Departments of Medicine and Medical Genetics, University of Wisconsin-Madison, Madison, WI

P6 172 C57BL/6J AND C57L/J MICE DIFFER IN THEIR ACID TASTE SENSITIVITY: EVIDENCE FROM BEHAVIORAL AND PHYSIOLOGICAL STUDIES
Boughton J.D.,\textsuperscript{1} Inoue M.,\textsuperscript{2} Ndubuizu O.,\textsuperscript{1} Beauachamp G.K.,\textsuperscript{1} Bachmanov A.A.\textsuperscript{3} \textsuperscript{1}Anat. & Neurobiol., Univ Maryland, Baltimore, MD; \textsuperscript{2}Laboratory of Cell Biol., Tokyo University of Pharm. and Life Sci., Hachioji, Tokyo, Japan; \textsuperscript{3}Monell Chemical Senses Center, Philadelphia, PA

P7 173 PTC TASTERS OUTPERFORM PTC NON-TASTERS ON A TEST OF REGIONAL (CN VII AND CN IX) TASTE IDENTIFICATION
Connelly T., Hastings L., Palecanda B., Doty R.L. Smell & Taste Center, University of Pennsylvania, Philadelphia, PA

XXIII. Gustatory Development

P8 174 NOTCH SIGNALING GENES EXPRESS IN DEVELOPING TASTE Papilla
Seta Y.,\textsuperscript{1} Seta C.,\textsuperscript{1} Barlow L.A.\textsuperscript{2} \textsuperscript{1}Department of Biological Sciences, University of Denver, Denver, CO; \textsuperscript{2}Rocky Mountain Taste and Smell Center, University of
Colorado Health Sciences Center, Denver, CO

P9 175 SURVIVAL AND NEUROPHYSIOLOGY OF EMBRYONIC RAT GENICULATE GANGLION NEURONS ARE ALTERED BY NEUROTOXINS
AJ-Hadiq S.M.,1 Bradley R.M.,2 MacCullum D.K.,2 Mistretta C.M.1 1Dentistry, Univ. Michigan, Ann Arbor, MI; 2Medical School, Univ. Michigan, Ann Arbor, MI

P10 176 ALPHA-GUSTDUCIN IMMUNOREACTIVITY IN DEVELOPING HAMSTER TASTE BUDS

P11 177 A POSSIBLE LIGAND-BASED ROLE FOR NEUROPLIN-2 IN CRANIAL SENSORY NERVE PATHFINDING
Ramilo R.C.,1 Kim K.,1 Farbman A.L.,2 Roehlin M.W.1 1Biology, Loyola University Chicago, Chicago, IL; 2Neurobiology and Physiology, Northwestern University, Evanston, IL

P12 178 NEURON-TARGET MATCHING IN DEVELOPING TASTE BUDS IS ACCOMPLISHED BY INCREASES IN TASTE CELL NUMBER
Hendricks S.J., Hill D.L. Psychology, University of Virginia, Charlottesville, VA

P13 179 PLACODALLY DERIVED SENSORY FIBERS GROW PREFERENTIALLY, BUT NOT EXCLUSIVELY, TOWARD OROPHARYNGEAL ENDOERM
Gross J.B.,1,2 Barlow L.A.2 1Department of Biology, University of Denver, Denver, CO; 2Rocky Mountain Taste and Smell Center, University of Colorado Health Sciences Center, Denver, CO

P14 180 CHARACTERIZATION OF WHOLE CHORDA TYMPANI NERVE TASTE RESPONSES DURING DEVELOPMENT IN THE C57BL/6J MOUSE
April O.L., Hill D.L. Psychology, University of Virginia, Charlottesville, VA

XXIV. Neurotransmitters

P15 181 WITHDRAWN

P16 182 DISTRIBUTION OF CCK, CGRP, NPY, AND GALANIN IN THE PRIMARY GUSTATORY NUCLEUS OF THE GOLDFISH
Farrell W.J., Finger T.E. Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO

P17 183 SEROTONERGIC MODULATION OF PUTATIVE IONOTROPIC GABA RECEPTORS IN CRAYFISH Olfactory Projection Neurons
Tan Z., Mellon D. Biology, University of Virginia, Charlottesville, VA

P18 184 SUBSTANCE P AND GNRH COLocalize IN THE NERVUS TERMINALIS OF SALAMANDER
Ebadifar B.,1 Wirsig-Wieghmann C.R.1 2Zoology, University of Oklahoma, Norman, OK; 2Cell Biology, University of Oklahoma, Oklahoma City, OK

P19 185 DO KAINATE RECEPTORS MEDIATE PRE- AND POSTSYNAPTIC EFFECTS?
Davila N.G., Horning M.S., Trombley P.Q. Biological Science, Florida State University, Tallahassee, FL

P20 186 EVIDENCE OF PRESYNAPTIC ACETYLChOLINE RECEPTORS ON ZEBRAFISH Olfactory SENSory NEURONS
Edwards J.G., Michel W.C. Department of Physiology, University of Utah, SLC, UT

XXV. Olfactory Plasticity and Development

P31 187 LIF mRNA UPREGULATION IN MACROPHAGES AND Olfactory RECEPTOR NEURONS FOLLOWING TARGET ABLATION

P32 188 DOES INTRanasAL APPLICATION OF ZINC Sulfate PRODuce ANOSMIA IN MICE?
McBride K.M.,1,2 Slotnick B.,1 Margolis E.3 1Department of Psychology, American University, Washington, DC; 2Laboratory of Membrane Biochemistry and Biophysics, National Institute on Alcohol Abuse and Alcoholism, National Institutes of Health, Rockville, MD; 3School of Medicine, University of Maryland, Baltimore, MD

P33 189 RETINOIC ACID ENHANCES THE RATE OF RECOVERY OF Olfactory FUNCTION FOLLOWING NERVE TRANSECTION
Yee K.K., Rawson N.E. Monell Chemical Senses Center, Philadelphia, PA

P34 190 ENHANCED ORN EXPRESSION OF HSP25 FOLLOWING Olfactory BULectomY
Carr V.M., Farbman A.I. Neurobiology & Physiology, Northwestern University, Evanston, IL

P35 191 PERIPHERAL DEAFFERENTATION CAUSES APOPTOSIS IN THE Olfactory BULb OF ADULT ZEBRAFISH
Byrd C.A., VanKirk A.M. Biological Sciences, Western Michigan University, Kalamazoo, MI

P36 192 OlfACTIon IN Olfactory BULectomIZED RATS
Pickett E.M.,1 Cockerham R.,2 Slotnick B.1 1Psychology, American University, Washington, DC; 2Anatomy, University of Maryland School of Medicine, Baltimore, MD
P37 193 NARIS OCCLUSION CAUSES ENHANCED OLFACTORY MARKER PROTEIN IMMUNOREACTIVITY: THE EFFECT OF AGE AT OCCLUSION AND LENGTH OF DEPRIVATION
Coppola D.,1,2 Hamilton K.A.,3 Cherry J.1 1Neuroscience Program, Centenary College, Shreveport, LA; 2Cellular Biology and Anatomy, Louisiana State University Health Sciences Center, Shreveport, LA; 3Psychology, Boston University, Boston, MA

XXVI. Reproductive Odors

P38 194 A BILE ACID FUNCTIONS AS A MALE SEX PHEROMONE IN THE SEA LAMPREY (PETROMYZON MARINUS)
Li W.,1 Scott A.P.,2 Sieffkes M.J.,1 Yun S.,1 Yan H.,3 Liu Q.,2 Gage D.1,3 1Fisheries and Wildlife, Michigan State University, East Lansing, MI; 2The Center for Environment, Fisheries & Aquaculture Science, Weymouth, United Kingdom; 3Department of Biochemistry, Michigan State University, East Lansing, MI

P39 195 MALE AXILLARY EXTRACTS EFFECT LUTENIZING HORMONE (LH) PULSING IN FEMALE RECIPIENTS
Preti G.,1,2 Wysocki C.J.,1 Barnhart K.,2 Sonheimer S.J.,2 Leyden J.J.2 1Monell Chemical Senses Center, Philadelphia, PA; 2Dept. of Dermatology, University of Pennsylvania, Philadelphia, PA; 3Dept. of Obstetrics and Gynecology, University of Pennsylvania, Philadelphia, PA

P40 196 PHEROMONES IN URINE OF RUTTING MALE MOOSE
Whittle C.L.,1 Bowyer R.T.,1 Drew K.,1 Preti G.,2 Clausen T.P.1 1Chemistry & Biochemistry, and Wildlife Biology, University of Alaska Fairbanks, Fairbanks, AK; 2Biological Sciences, University of Alaska Fairbanks, Fairbanks, AK; 3Institute of Arctic Biology, University of Alaska Fairbanks, Fairbanks, AK; 4Monell Chemical Senses Center, Philadelphia, PA; 5Chemistry & Biochemistry, University of Alaska Fairbanks, Fairbanks, AK

P41 197 THE SPATIAL ORGANIZATION OF THE PERIPHERAL OLFACTORY ORGAN IN THE ROUND Goby (NEOGOBIOUS MELANOSTOMUS), A TELHOST FISH
Belanger R.M., Corkum L.D., Zielinski B. 1Biological Sciences, University of Windsor, Windsor, ON, Canada

P42 198 PREFERENTIAL ACTIVATION OF NEURONS IN ROSTRAL ACCESSORY OLFACTORY BULB (AOB) OF MALE HAMSTERS BY FEMALE ODORS
Bath K.G., Johnston R.E. 1Psychology, Cornell University, Ithaca, NY

P43 199 HORMONAL REGULATION OF SYNTHESIS AND DISCHARGE OF A FEMALE NEWT-ATTRACTING PHEROMONE, SODEFRIN
Kikuyama S.,1 Iwata T.1, Toyoda F.,2 Tanaka S.,2 Yamamoto K.1 1Biology, School of Education, Waseda University, Tokyo, Japan; 2Phisiology, Nara Medical University, Kashihara, Japan; 3Biology, Shizuoka University, Shizuoka, Japan

P44 200 HUMAN PHEROMONES AND A MAMMALIAN MODEL OF MATE PREFERENCE
Kohl J.V. Laboratory, Grover C. Dils Medical Center, Caliente, NV

P45 201 CONTEXT AFFECTS ANS AND PSYCHOLOGICAL RESPONSES TO PUTATIVE HUMAN PHEROMONES
Hayreh D., Jacob S., McClintock M. Institute for Mind and Biology, University of Chicago, Chicago, IL

XVII. Sweet Taste

P46 202 COMPARATIVE TASTE RESPONSES IN VERTEBRATES TO COMPOUNDS SWEET IN HUMANS
Glaser D.,1 Tinti J.M.,2 Nofre C.1 1Anthropological Institute, University of Zürich, Zürich, Switzerland; 2Faculty of Medicine of Lyon Laennec, University of Lyon 1, Lyon, France

P47 203 COMPUTATIONAL STUDIES OF SWEET TASTING COMPOUNDS
Hattoriwagama C.K.,1 Drew M.G.,1 Morini G.,2 Barker J.S.1 1Department of Chemistry, University of Reading, Whiteknights, Reading, RG6 6AD, United Kingdom; 2Dipartimento di Sciene Molecolari Agroalimentari, Università di Milano, Via Celoria, 2-120133, Milano, Italy

P48 204 TASTE DEFECTS IN DROSOPHILA NORPA MUTANTS
Chyb S. Department of Biology, Imperial College of Science, Technology and Medicine. London, United Kingdom

P49 205 HYDRATION PROPERTIES AND PROTON EXCHANGE IN AQUEOUS SUGAR SOLUTIONS STUDIED BY TIME DOMAIN NUCLEAR MAGNETIC RESONANCE (TD-NMR)
Mathlouthi M., Araslanov V. Laboratoire de Chimie Physique Industrielle, Université de Reims, B.P.1039, Reims, France

P50 206 SWEET RECEPTOR MECHANISMS: STIMULATING EFFECTIVENESS OF HIGH INTENSITY SWEETENERS AND ENANTIOMERS FOR FLY BEHAVIORAL AND SUGAR RECEPTOR CELL RESPONSES
Higgins T.T.,1 Kennedy L.M.1 1Biology, Clark University, Worcester, MA; 2Chemical Senses, National Science Foundation, Arlington, VA

P51 207 CATION EFFECTS IN CYCLAMATE SWEETENERS
Haywood K.A.,1 Spillane W.J.,2 Walsh R.,2 Coyle C.,2 Birch G.G.1 1School of Food
Biosciences, The University of Reading, Reading, United Kingdom; \(^2\)Department of Chemistry, National University of Ireland, Galway, Ireland

P52 208 A RATIONAL DESIGN OF NEW INTENSIVE SWEETENERS FROM NATURAL COMPOUNDS
Bassoli A., Borgonovo G., Merlini L., Morini G. Scienze Molecolari Agroalimentari (DISMA), Università di Milano, Milano, Italy

Saturday, April 28, 2001

Contintental Breakfast 7:30-9:00 AM

SLIDES

Saturday Morning - 8:00 AM - 9:45 AM

XXVIII. Systems Analysis of Gustatory Function
Chairperson: Janneave Gent

8:00 AM 209 NEUROPHYSIOLOGICAL TASTE RESPONSES OF SINGLE GENICULATE GANGLION CELLS RECORDED IN VIVO IN THE RAT
Sollars S.I., Hill D.L. Psychology, University of Virginia, Charlottesville, VA

8:15 AM 210 CALCIUM DEPRIVATION ALTERS GUSTATORY-EVOKED ACTIVITY IN THE RAT NUCLEUS OF THE SOLITARY TRACT
McCaughhey S.A., Tordoff M.G. Monell Chemical Senses Center, Philadelphia, PA

8:30 AM 211 HAMSTER STIMULUS GENERALIZATION PATTERNS FOR TASTE MIXTURES
Frank M.E., Hettinger T.P., Formaker B.K. Oral Diagnosis, UCONN Health Center, Farmington, CT

8:45 AM 212 MULTIMODAL MONOSODIUM L-Glutamate (MSG) SENSITIVITY IN HUMAN
Lugaz O.,\(^2\) Pillias A.M.,\(^2\) Faurion A.,\(^2\) \(^1\)Neurobiologie Sensorielle, CNRS/EPHE, MASSY, France; \(^2\)EA459, Paris7, PARIS, France

9:00 AM 213 DYNAMIC AND MULTIMODAL RESPONSES IN RAT GUSTATORY CORTICAL SINGLE NEURON ENSEMBLES
Katz D.B., Simon S.A., Nicolelis M.A. Neurobiology, Duke University, Durham, NC

9:15 AM 214 CROSS ADAPTATION AND BITTER SUPPRESSION OF L-TRYPTOPHAN AND L-PHENYLALANINE: FURTHER SUPPORT FOR COMMON TRANSDUCTION MECHANISM
Keast R.S., Breslin P.A. Monell Chemical Senses Center, Philadelphia, PA

28

9:30 AM 215 TASTE-TASTE AND TASTE-SMELL INTERACTIONS LIMIT THE PERCEPTION OF COMPONENTS AND INPUT TO FLAVOR
Laing D.G., Link C., Jinks A.L., Hutchinson I. Centre For Advanced Food Research, University of Western Sydney, Richmond, Australia

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

10:00 AM - 12:00 PM

SYMPOSIUM: XXIX. Signal Transduction in the Vomeronasal Organ
Chairperson: Frank Zufall

216 10:00 AM Halpern M.
Anatomy and Cell Biology, SUNY Downstate Medical Center, Brooklyn, NY
“SIGNAL TRANSDUCTION IN THE VOMERONASAL EPITHELIUM OF MAMMALS AND REPTILES”

217 10:30 AM Dulac C.
Molecular and Cellular Biology, Harvard University, Cambridge, MA
“MOLECULAR MECHANISMS OF PHEROMONE DETECTION IN MAMMALS”

218 11:00 AM Zufall F.
Anatomy and Neurobiology, University of Maryland School of Medicine, Baltimore, MD
“PHEROMONE TRANSDUCTION BY MOUSE VOMERONASAL NEURONS”

219 11:30 AM Liman E.R.
Neurobiology, University of Southern California, Los Angeles, CA
“A MEMBER OF THE TRP FAMILY OF ION CHANNELS APRIL MEDIATE VNO SENSORY TRANSDUCTION”

XXX. Cortical Processing in Chemosensory Systems

P1 220 REPEATED TRIGEMINAL STIMULI RESULT IN A CONSTANT OR EVEN SENSITIZED SII ACTIVITY WHILE OLF FACTORY RELATED ACTIVITY GENERICLY SHOWS ATTENUATION
Kettenmann B.,\(^1\) Francis S.,\(^2\) Aspen J.,\(^3\) Renner B.,\(^3\) McGlone F.,\(^3\) Kobal G.,\(^3\) Bowtell R.\(^4\) \(^1\)Pharmacology, Univ. of Erlangen-Nurenberg, Erlangen, Germany; \(^2\)Magnetic Resonance Centre, Univ. of Nottingham, Nottingham, United Kingdom; \(^3\)Colworth Laboratory, Unilever Research, Belford, United Kingdom; \(^4\)Port Sunlight
Laboratory, Unilever Research, Wirral, United Kingdom

P2 221 Olfactory Event-Related Potentials to Ortho- and Retronasal Stimulation
Heilmann S., Hummel T. Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany

P3 222 Insular Neurons Encode Salience of Taste Cues in an Oral Dual-Reinforcer Self-Administration Paradigm
Aström K.K., Woodward D.J. Physiology and Pharmacology, Wake Forest Univ Sch of Medicine, Winston-Salem, NC

P4 223 Enhanced Cholinergic Suppression of Previously Strengthened Synapses Enables the Formation of Self-Organized Representations in Olfactory Cortex
Lindner C., Maloney M., Patil M.M., Hasselmo M.E. Psychology, Boston University, Boston, MA

P5 224 The Role of Acetylcholine in Odor Discrimination and Cross-Habitation by Anterior Piriform Cortex Neurons
Wilson D.A. Zoology, University of Oklahoma, Norman, OK

P6 225 The Influence of Context on Primary Olfactory Processing
Kay L.M.,1,2 Laurent G.1 1Inst. for Mind & Biology, Univ. of Chicago, Chicago, IL; 2Biology Div., Caltech, Pasadena, CA

P7 226 Intra-Class Correlation Coefficients for Between-Session Measurements of the Olfactory Event-Related Potential
Thesen T., Murphy C.1,2 1Department of Psychology, San Diego State University, San Diego, CA; 2School of Medicine, University of California, San Diego, San Diego, CA

P8 227 Odorant Discrimination Using Olfactory Event-Related Potentials
Gullotta F.P.,1 Hayes C.S.,1 Kobal G.2 1Philip Morris USA, Richmond, VA; 2U. Erlangen-Nuremberg, Erlangen, Germany

P9 228 Magnetoencephalographic Analyses of Cortical Gustatory Responses in Humans
Yamamoto C.,1,3 Nagai H.,2,3 Takahashi K.,1 Nakagawa S.,1 Yamaguchi M.,3 Tonoike M.,1 Kurihara Y.,4 Yamamoto T.1 1Human Sciences, Graduate School of Osaka Univ., Osaka, Japan; 2Res. Center, Suntory Ltd., Osaka, Japan; 3LERC, Electrotechnical Lab., Osaka, Japan; 4National Food Res. Inst., Tsukuba, Japan

P10 229 Odor-Evoked Cellular Activity Detected by Fos Immunocytochemistry Is in Principal Cells in Piriform

CORTEX
Ilig K.R., Haberly L.B. Anatomy Dept, University of Wisconsin, Madison, WI

P11 230 Transient Excitability Changes in Piriform Cortex Produced by Activation of Cortical Association Fibers
Gilmore H.L., Stripling J.S. Psychology, Univ. of Arkansas, Fayetteville, AR

P12 231 Simultaneous Recording of EEG, OERP and “Bulbar” Potentials in Humans
Jacob T.J., Hari C., Wang L. School of Biosciences, Cardiff University, Cardiff, United Kingdom

XXXI. Disease and Chemical Senses I

P13 232 Olfactory Testing with Sniffin’ Sticks in Idiopathic Parkinsonism
Kobal G.,1 Lang C.J.2 1Pharmacology, University Erlangen-Nuremberg, Erlangen, Germany; 2Neurology, University Erlangen-Nuremberg, Erlangen, Germany

P14 233 Screening of Olfactory Function Using a 4 Minute Odor Identification Test: Reliability, Normative Data, and Investigations in Patients with Olfactory Loss
Kornher C.G.,1 Hummel T.,1 Roseheim K.,1 Kobal G.2 1Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany; 2Pharmacology, University of Erlangen-Nuremberg, Erlangen, Germany

P15 234 Daily Life Impact of Olfactory Loss
Temmel A.F.,1 Quint C.,1 Pabinger S.,1 Schickinger-Fischer B.,1 Stoller E.,2 Rosenheim K.,1 Hummel T.1 1ENT, University of Vienna, Vienna, Austria; 2ENT, University of Dresden Medical School, Dresden, Germany

P16 235 Health Symptoms from Exposure to Odorous Chemicals: Physiological versus Cognitive Effects
Smeets M., Dalton P., Maute C. Monell Chemical Senses Center, Philadelphia, PA

P17 236 Olfactory Deficits in Alcoholics
Rupp C.I., Mair D., Kurz M., Hinterhuber H. Psychiatry, University Clinics of Innsbruck, Innsbruck, Austria

P18 237 Priming Effect on Olfactory Functions in Patients with Seasonal Allergies
Schickinger-Fischer B.,1 Temmel A.F.,1 Quint C.,1 Toth J.,1 Hummel T.1 1ENT-Department, University of Vienna, Vienna, Austria; 2ORL-Department, University of Vienna, Dresden, Germany
A NEW SCREENING TEST FOR OLFATORY DISORDERS BASED ON RETROPHARYNGEAL SMELLING
Renner B., Dreier J., Kobal G. Pharmacology, University of Erlangen-Nuremberg, Erlangen, Germany

XXXII. Olfactory Development

IMMUNOCYTOCHEMICAL AND FUNCTIONAL IDENTIFICATION OF PACAP IN DEVELOPING AND ADULT OLFATORY EPITHELIUM
Lucero M.T., Hegg C.C. Physiology, University of Utah, Salt Lake City, UT

ONTOGENY IN OLFACITION: COMPARISON OF TURNOVER IN THE OLFATORY SYSTEM OF POST-LARVAL AND ADULT SPINY LOBSTERS
Derby C.D., Maskol K., Cate H.S., Steullet P., Harrison P.J. Biology, Georgia State University, Atlanta, GA

MOLECULAR CLONING, CHARACTERIZATION, CELLULAR LOCALIZATION AND POSSIBLE FUNCTION OF A NOVEL CUB SERINE PROTEASE IN THE OLFATORY ORGAN OF THE SPINY LOBSTER PANULIRUS ARGUS
Levine M.Z., Walthall W.W., Tai P.C., Harrison P.H., Derby C.D. Biology, Georgia State University, Atlanta, GA

A STUDY OF MAM/FA II EXPRESSION IN THE NORMAL AND LESIONED RAT OLFATORY SYSTEM
Fang H., Hamlin J.A., Schwob J.E. Anatomy and Cellular Biology, Tufts University School of Medicine, Boston, MA

OLFACTORY PLACODE DEVELOPMENT AND CELL DEATH IN THE MASTERBLIND MUTANT
Sanders L.H., Whitlock K.E. Genetics and Development, Cornell University, Ithaca, NY

EXPRESSION OF GALECTIN-1 AND GALECTIN-3 IN THE HUMAN VOMERONASAL ORGAN
Witt M.,1 Hummel T.,2 Heilmann S.,2 Kasper M.1 1Anatomy, Tech. Univ. Dresden, Dresden, Germany; 2Otorhinolaryngology, Tech. Univ. Dresden, Dresden, Germany

NOGGIN AND BMP EXPRESSION IN THE SEL OF ADULT MICE
Peretto P.,1 Modena C.,1 Fasolo A.,1 Margolis F.L.1 1Human and Animal Biology, University, Torino, Italy; 2Anat. & Neurobiol., University of MD, Baltimore, MD

NADPH DIAPHORASE IS DEVELOPMENTALLY REGULATED IN RAT OLFATORY EPITHELIUM
Schmaechtenberg O.,1 Bicker G.,2 Bacigalupo J.1 1Department of Biology, Faculty of Sciences and Millennium Institute for Advanced Studies in Cell Biology and
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Locations
- Slide and Symposium Sessions
- Salons E & F
- All morning symposia begin at 10:00 AM
- All evening symposia begin at 8:00 PM
- Poster Sessions & Exhibits
- Salons A, B, H, & G
- Continental Breakfast
- 7:30-9:00 Prefunction Area
- MidMorning Break
- 7:30-10:00 Prefunction Area
- Evening Break
- 7:45-8:15
- Cash Lunch Bar
- after morning sessions
- Prefunction Area
- 9:00-12:00 Poster Sessions & Exhibits
- Salons A, B, H, & G
XXXIII. Functional Studies of Olfactory Glomeruli

P31 247 A SINGLE FUNCTIONAL UNIT IN RAT OLFACTORY BULB: FUNCTIONAL MRI STUDY
Xu F., Kida I., Hyder F., Shulman R.G. 1 Department of Diagnostic Radiology, Yale Medical School, New Haven, CT; 2Molecular Biophysics & Biochemistry, Yale Medical School, New Haven, CT

P32 248 MOLECULAR DISSECTION OF URINE ODOR EVOLED RESPONSE IN THE MAIN OLFACTOR Y BULB
Schaefer M.L., Restrepo D. Cell & Structural Biology, University of Colorado Health Science Center, Denver, CO

P33 249 INHIBITION OF BURST FIRING AND BACKPROPAGATING ACTION POTENTIALS IN THE DENDRITES OF MITRAL CELLS
Low G. Monell Chemical Senses Center, Philadelphia, PA

P34 250 GLUTAMATE TRANSPORTERS AND ODOR PROCESSING IN THE OLFACTOR Y GLOMERULUS
Josephson E.M. Anatomy, Physiology and Pharmacology, Auburn University, Auburn University, AL

P35 251 NITRIC OXIDE MODULATES ODOR-EVOKE D ACTIVITY PATTERNS IN THE GLOMERULI OF THE MOTH ANTENNAL LOBE
Lei H., Christensen T.A., Nighorn A.J., Hildebrand J.G. Arizona Research Labs Div of Neurobiology, University of Arizona, Tucson, AZ

P36 252 SYNCHRONOUS BURSTING AMONG JUXTAGLOMERULAR NEURONS OF THE RAT MAIN OLFACTOR Y BULB (MOB) IN VITRO
Hayur A., Karnup S., Shipley M.T., Ennis M. Anatomy and Neurobiology, University of Maryland, Baltimore, MD

XXXIV. Transduction in Olfactory and Vomeronasal Receptor Cells

P37 253 CONTRIBUTION OF CYCLIC-NUCLEOTIDE-GATED CHANNELS TO THE RESTING CONDUCTANCE OF OLFACTOR Y RECEPTOR NEURONS
Pun R.Y., Kleene S.J. University of Cincinnati, Cincinnati, OH

P38 254 CHEMOSIGNAL-ACTIVATED WHOLE-CELL CURRENTS IN THE VOMERONASAL (VN) ORGAN
Fadool D.A., Wachowiak M., Brann J.H. 1 Prog In Neurosci & Mol Biophys, Florida State Univ, Tallahassee, FL; Dept of Cell & Molecular Physiology, Yale Univ School Med, New Haven, CT
P40 256 PHOSPHATIDYLINOSITOL 3-KINASE-DEPENDENT SIGNALING IN RAT OLFACTORY RECEPTOR NEURONS
Ache B.W.,1 Spehr M.,2 Wetzel C.H.,2 Hatt H.2 1 Whitney Laboratory, University of Florida, St. Augustine, FL; 2 Cell Physiology, Ruhr University Bochum, Bochum, Germany

P41 257 CO2-SENSITIVE OLFACTORY RECEPTORS IN RATS
Cecala A.L., Hammers D.B., Coates E.L. Neuroscience Program, Allegheny College, Meadville, PA

P42 258 CL AND K CURRENTS UNDERLIE HYPERPOLARIZING RECEPTOR POTENTIALS IN LOBSTER OLFACTORY RECEPTOR NEURONS
Doolin R.E.,1,2 Ache B.W.1,2 1 Whitney Lab, Univ. Florida, St. Augustine, FL; 2 Neuroscience, Univ. Florida, Gainesville, FL

P43 259 BIOSYNTHESIS AND LOCALIZATION OF TAURINE IN THE NASAL MUCOSA
Kratkin I.L., Hao Y.P., Hastings L. Smell and Taste Center, University of Pennsylvania School of Medicine, Philadelphia, PA

P44 260 PRIMARY CULTURE OF LOBSTER (HOMARUS AMERICANUS) OLFACTORY RECEPTOR NEURONS
Stepanyan R., McClintock T.S. Physiology, University of Kentucky, Lexington, KY

P45 261 PATCH-CLAMP RECORDINGS FROM HUMAN OLFACTORY NEURONS
Lischka F.,1 Rawson N.E.,1 Lowry L.D.,2 Pribitkin E.,2 Teeter J.1 1 Monell Chemical Senses Center, Philadelphia, PA; 2 Thomas Jefferson Hospital, Philadelphia, PA

P46 262 CELL TYPE SPECIFIC EXPRESSION OF OLFACTORY-ENRICHED MRNAS IN THE LOBSTER OLFATORY ORGAN
Hollins B., McClintock T.S. Physiology, University of Kentucky, Lexington, KY

P47 263 PHOSPHORYLATION OF VOLTAGE-GATED ION CHANNELS IN RAT OLFACTORY RECEPTOR NEURONS
Hatt H., Spehr M., Wetzel C.H. Cell Physiology, Ruhr-Univ. Bochum, Bochum, Germany

XXXV. Orientation to Chemical Stimuli
P39 255 IONIC CURRENTS AND ODOR RESPONSES OF CULTURED OLFAC TORY RECEPTOR NEURONS FROM ANTENNAE OF THE HONEYBEE
Laurent S.,1 Jakob L.,1 Masson C.2 1CNRS, Centre European des Science du Gout, Dijon, France; 2CNRS, ESPCI, Paris, France

P40 256 PHOSPHATIDYLINOSITOL 3-KINASE-DEPENDENT SIGNALING IN RAT OLFAC TORY RECEPTOR NEURONS
Ache B.W.,1 Spehr M.,2 Wetzel C.H.,2 Hatt H.2 1Whitney Laboratory, University of Florida, St. Augustine, FL; 2Cell Physiology, Ruhr University Bochum, Bochum, Germany

P41 257 CO2- SENSITIVE OLFAC TORY RECEPTORS IN RATS
Cecala A.L., Hammers D.B., Coates E.L. Neuroscience Program, Allegheny College, Meadville, PA

P42 258 CL AND K CURRENTS UNDERLIE HYPERPOLARIZING RECEPTOR POTENTIALS IN LOBSTER OLFAC TORY RECEPTOR NEURONS
Doolin R.E.,1,2 Ache B.W.,1,2 1Whitney Lab, Univ. Florida, St. Augustine, FL; 2Neuroscience, Univ. Florida, Gainesville, FL

P43 259 BIOSYNTHESIS AND LOCALIZATION OF TAURINE IN THE NASAL MUCOSA
Kratskin I.L., Hao Y.P., Hastings L. Smell and Taste Center, University of Pennsylvania School of Medicine, Philadelphia, PA

P44 260 PRIMARY CULTURE OF LOBSTER (HOMARUS AMERICANUS) OLFAC TORY RECEPTOR NEURONS
Stepanyan R., McClintock T.S. Physiology, University of Kentucky, Lexington, KY

P45 261 PATCH-CLAMP RECORDINGS FROM HUMAN OLFAC TORY NEURONS
Lischka F.,1 Rawson N.E.,1 Lowry L.D.,2 Pribytkin E.,3 Teeter J.1 1Monell Chemical Senses Center, Philadelphia, PA; 2Thomas Jefferson Hospital, Philadelphia, PA

P46 262 CELL TYPE SPECIFIC EXPRESSION OF OLFAC TORY-ENRICHED MRNAS IN THE LOBSTER OLFAC TORY ORGAN
Holins B., McClintock T.S. Physiology, University of Kentucky, Lexington, KY

P47 263 PHOSPHORYLATION OF VOLTAGE-GATED ION CHANNELS IN RAT OLFAC TORY RECEPTOR NEURONS
Hatt H., Spehr M., Wetzel C.H. Cell Physiology, Ruhr-Univ. Bochum, Bochum, Germany

XXXV. Orientation to Chemical Stimuli

P48 264 HABITAT STRUCTURE, HYDRODYNAMICS, AND CHEMICAL ORIENTATION IN STREAM SYSTEMS
Moore P.A.,1,2 1Laboratory for Sensory Ecology, Bowling Green State University, Bowling Green, OH; 2J.P. Scott Center for Neuroscience, Mind & Behavior, Bowling Green State University, Bowling Green, OH

P49 265 JUVENILE HAWAIIAN GOBID FISH EMPLOY ODOR CUES TO LOCATE FRESHWATER STREAMS FROM THE OCEAN AND TO GUIDE THEM UP THEIR TERMINAL WATERFALLS
Sorensen P.W. Fisheries & Wildlife, U of MN, St. Paul, MN

P50 266 THE EFFECTS OF ANTENNAL LESIONS ON ORIENTATION BEHAVIOR OF THE CRAYFISH, ORCONECTES RUSTICUS
Kraus-Epley K.E., Moore P.A. Laboratory for Sensory Ecology and the J.P. Scott Center for Neuroscience Mind and Behavior, Bowling Green State University, Bowling Green, OH

P51 267 CONDITIONED TASTE AVERSION AND LOCOMOTOR CIRCLING INDUCED BY MAGNETIC FIELDS
Smith J.C.,1 Pittman D.W.,1 Barranco J.M.,2 Brooks E.H.,1 Houpt T.A.1 1Psychology, Fla. St. Univ., Tallahassee, FL; 2Biology, Fla. St. Univ., Tallahassee, FL

P52 268 TRACKING STUDIES IN THE AMERICAN LOBSTER: EFFECT OF DISTANCE FROM A LEAKY ODOR SOURCE
Voigt R.,1 Basil J.,2 Atma J.1 1Boston University Marine Program, Boston University, Woods Hole, MA; 2Department of Psychology, Brooklyn College (CUNY), New York, NY; 3Boston University Marine Program, Boston University, Woods Hole, MA

P53 269 CATFISH POSSESSING A SMALL PORTION OF A REGENERATED OLFAC TORY ORGAN CAN DISCRIMINATE AMINO ACIDS
Stenovec M., Valentincic T. University of Ljubljana, Ljubljana, Slovenia

P54 270 ATTRACTION TO MATERNAL ODOR BY JUVENILE CRAYFISH, ORCONECTES RUSTICUS
Long K.L., Moore P.A. Laboratory for Sensory Ecology, Bowling Green State University, Bowling Green, OH

P55 271 BOUNDARY-LAYER EFFECT ON THE CHEMICAL SIGNAL MOVEMENT ALONG THE BODY OF A MODEL BROWN BULLHEAD (AMEIURUS NEBULOSUS)
Sherman M.L.,1 Moore P.A.1,2 1Laboratory for Sensory Ecology, Bowling Green State University, Bowling Green, OH; 2J.P. Scott Center for Neuroscience, Mind and Behavior, Bowling Green State University, Bowling Green, OH
P56  272  GNRH, MIGRATORY BEHAVIOR AND OLFATORY SENSITIVITY IN HOMING PACIFIC SALMON  
Dittman A.H.  Integrative Biology Program, Northwest Fisheries Science Center, Seattle, WA

Clinical Luncheon 12:00-2:00  
C. Murphy, coordinator  
(Salons C & D)

WORKSHOPS

Saturday Evening - 4:30 PM - 6:00 PM

XXXVI. Molecular & Functional Mapping of the Olfactory Bulb (Salons C & D)

273  MOLECULAR & FUNCTIONAL MAPPING OF THE OLFACTORY BULB  
Finger T., Restrepo D., Shepherd G.M. 1 Dept. Cellular & Structural Biology,  
Univ. Colorado Health Sci. Ctr., Denver, CO; 2 Section of Neurobiology, FMB236,  
Yale University Medical School, New Haven, CT

SLIDES

Saturday Evening - 7:00 PM - 8:00 PM

XXXVII. Olfactory Processing  
Chairperson: Chuck Derby

7:00 PM  274  ODOR ELICITED ACTIVITY PATTERNS IN THE MOUSE OLFATORY BULB REVEALED BY FMRI  
Xu F., Kida I., Hyder F., Greer C.A., Rothman D., Shepherd G.M.  
Department of Neurobiology and Neurosurgery, and MRC, Yale Medical School, New Haven, CT

7:15 PM  275  BEHAVIORAL DISCRIMINATION OF SEX PHEROMONE MIXTURES CORRESPONDS WITH PHYSIOLOGICAL PROFILES OF PROJECTION NEURONS  
Poling K., Hanson L., Sorensen P.  
Fisheries & Wildlife, Univ. of Minnesota, Saint Paul, MN

7:30 PM  276  SINGLE-UNIT RECORDING DEMONSTRATES THAT PHEROMONES ARE DISCRIMINATED BY A COMBINATION OF LABELED-LINE AND POPULATION CODING IN THE GOLDFISH OLFATORY BULB

Hanson L.R., Sorensen P.W.  Grad Program in Neuroscience, U of MN, St. Paul, MN

7:45 PM  277  RESPONSE OF MALE DROSOPHILA TO FEMALE PHEROMONES  
Neuroscience and Cell Biology, Robert Wood Johnson Med Sch, Piscataway, NJ

Evening Break 7:45-8:15 PM

8:00 PM - 10:00 PM

SYMPOSIUM: XXXVIII. Odor/Taste Interactions and Flavor Perception  
Chairperson: John Prescott/Paul Breslin

278  8:00 PM  
Food Science, Nottingham University, Sutton Bonington, United Kingdom  
"INVESTIGATING TASTE AND AROMA INTERACTIONS IN FOODS"

279  8:20 PM  
Scott T.R.  
Psychology, San Diego State University, San Diego, CA  
"INTERACTION OF THE SENSES IN THE CONSTRUCTION OF FLAVOR"

280  8:40 PM  
Small D.M., 1,2 Jones-Gotman M.K. 2  
1 Cognitive Brain Mapping Group, Northwestern University, Chicago, IL; 2 Neurology and Neurosurgery, McGill University/Montreal Neurological Institute, Montreal, PQ, Canada  
"NEURAL SUBSTRATES OF TASTE/SMELL INTERACTIONS AND FLAVOUR IN THE HUMAN BRAIN"

281  9:00 PM  
Frank R.A.  
Psychology, University of Cincinnati, Cincinnati, OH  
"A JUDGMENT MODEL FOR RATINGS OF COMPLEX CHEMOSENSORY STIMULI"

282  9:20 PM  
Breslin P.A., Doolittle N., Dalton P.  
Monell Chemical Senses Center, Philadelphia, PA  
"SUBTHRESHOLD INTEGRATION OF TASTE AND SMELL: THE ROLE OF EXPERIENCE IN FLAVOR INTEGRATION"

283  9:40 PM  
Prescott J.  
Sensory Science Research Centre, University of Otago, Dunedin, New Zealand
Zealand
“COGNITIVE INFLUENCES ON ODOR/TASTE INTERACTIONS IN MIXTURES”

This symposium was sponsored in part by International Flavors and Fragrances, Inc.

XXXIX. Development of Olfactory Glomeruli

P1 284 CO-LOCALIZATION OF 5-HT1A RECEPTORS AND β1-ADRENOCEPTORS IN THE MAIN OLFACTORY BULB OF THE RAT
McLean J.H., Yuan Q., Harley C.W. Div. of Basic Medical Sciences, Memorial University of Newfoundland, St. John's, NF, Canada

P2 285 THE OMP-LACZ TRANSGENE IMIMICS THE UNUSUAL EXPRESSION PATTERN OF OR-Z6, A NEW ODORANT RECEPTOR GENE: IMPLICATION FOR LOCUS-DEPENDENT GENE-EXPRESSION

P3 286 CARBOHYDRATES AS AXON GUIDANCE MOLECULES IN THE OLFACTORY SYSTEM
St John J.A., Key B. Anatomical Sciences, University of Queensland, Brisbane, Australia

P4 287 EFFECT OF ANTELLAR GRAFTS BETWEEN TWO MOTH SPECIES ON OLFACTORY PROCESSING OF SEX PHEROMONES
Lian C.E., Vickers N.J. 1 Entomology, Cornell University, Geneva, NY; 2 Biology, University of Utah, Salt Lake City, UT

P5 288 IN VITRO ANALYSIS OF INTERACTIONS BETWEEN OLFACTORY RECEPTOR GROWTH CONES AND CENTRALLY DERIVED GLIA
Tucker E.S., Oland L.A., Tolbert L.P. Dept. of Cell Biology & Anatomy, and ARL Div. of Neurobiology, University of Arizona, Tucson, AZ

P6 289 DEVELOPMENT OF OLFACTORY GLOMERULI: THE ROLE OF EXTRACELLULAR MATRIX MOLECULES

P7 290 BOTH AN EPH-LIKE RECEPTOR TYROSINE KINASE (RTK) AND ITS LIGAND, EPHRIN, ARE EXPRESSED IN THE DEVELOPING OLFACTORY SYSTEM OF THE MOTH, MANDUCA SEXTA
Kaneko M., Nighorn A. ARLDN, University of Arizona, Tucson, AZ

P8 291 BEHAVIOR OF OLFACTORY RECEPTOR AXONS GROWING NEAR AND

IN EXPLANTS OF THE AXON SORTING ZONE OF THE MOTH OLFATORY SYSTEM
Oland L.A., Pott W.M., Tolbert L.P. Arizona Research Laboratories Division of Neurobiology, University of Arizona, Tucson, AZ

XL. Perireceptor Processes

P9 292 RETRONASAL PERCEPTION AND THE TEMPORAL PROCESSING OF ODORANTS
Wilkes F.J., Laing D.G., Monteleone E., Hutchinson I., Jinks A.L. Centre For Advanced Food Research, University of Western Sydney, Richmond, Australia

P10 293 IDENTIFICATION OF PROTEINS THAT MEDIATE PHEROMONE RECOGNITION IN COCKROACHES
Robinson K., Schal C., Anholt R. W. M. Keck Center for Behavioral Biology, N. C. State Univ., Raleigh, NC

P11 294 ALBUMIN-AN IDEAL PHEROMONE CARRIER PROTEIN
Rasmussen L.E., Lazar J., Greenwood D.R., Prestwich G.D. 1 Dept. of Biochemistry, Oregon Graduate Inst., Beaverton, OR; 2 Dept. of Medicinal Chemistry, Univ. of Utah, Salt Lake City, UT; 3 Mr. Albert Research Centre, Auckland, New Zealand

P12 295 RETRONASAL AND ORTHONASAL ODORANT INTERACTIONS: MASKING
Sun B.C., Halpern B.P. Psychology and Neurobiology & Behavior, Cornell University, Ithaca, NY

P13 296 OLFACTORY SPECIFIC SNMPS OF LEPIDOPTERA DEFINE A UNIQUE FAMILY OF INVERTEBRATE CD36-LIKE RECEPTOR PROTEINS
 Rogers M.E., Krieger J., Vogt R.G. 1 Biological Sciences, University of South Carolina, Columbia, SC; 2 Institute of Physiology, University of Stuttgart-Hohenheim, Stuttgart, Germany; 3 Biological Sciences, Columbia University, New York, NY

P14 297 DIFFERENTIAL EXPRESSION OF CLUSTERED OBP GENES: A COMPARATIVE STUDY OF THE DISTRIBUTION OF PHP AND GOBP2 IN MANUDA SEXTA
Vogt R.G., Bobbit J., Rogers M.E. 1 Biological Sciences, University of South Carolina, Columbia, SC; 2 Biological Sciences, Columbia University, New York, NY

P15 298 THE IMPACT OF MUCOSAL SOLUBILITY ON CHANGES IN ODORANT PERCEPTUAL INTENSITY
Spicer S.M., Hornung D.E., Kurtz D.B., Newlon J.W. Upstate Medical University, Syracuse, NY

P16 299 CHARACTERIZATION OF GLUTATHIONINE S-TRANSFERASES
XLI. Receptors and Ligands

P 17       300       THE OLFACTOROME: EXAMINING THE GENE EXPRESSION REPERTOIRE OF OLFACTORY MUCOSA
            Weech M.C., 1 Morrison E.E., 1 Walters E., 1 Logan G.K. 1 1Biochemistry and
            Molecular Biology, Howard University, Washington, DC; 2Department of Anatomy
            Physiology and Pharmacology, Auburn University, Auburn, AL

P 18       301       MOLECULAR EVOLUTION OF THE INSECT CHEMOSENSORY RECEPTOR
            SUPERFAMILY
            Robertson H.M.  Department of Entomology, University of Illinois, Urbana, IL

P 19       302       RECONSTITUTION OF OLFACTORY RECEPTORS THAT RECOGNIZE
            OVERLAPPING SETS OF ODORANTS WITH DIFFERENT SPECIFICITY
            Kajiya K., Tanaka M., Kataoka H., Touhara K.  Integrated Biosciences, The
            University of Tokyo, Tokyo, Japan

P 20       303       REPERTOIRE OF HUMAN OLFATORY RECEPTORS
            Echeverri F., Nguyen T., Zoizalya S.  Senomys, Inc., La Jolla, CA

P 21       304       FUNCTIONAL ANALYSIS OF A RECOMBINANTLY EXPRESSED HUMAN
            ODORANT RECEPTOR
            Spehr M., Gisselmann G., Hatt H., Wetzel C.H.  Cell Physiology, Ruhr-Universitaet
            Bochum, Bochum, Germany

P 22       305       FUNCTIONAL EXPRESSION AND CHARACTERIZATION OF A
            DROSOPHILA ODORANT RECEPTOR IN A HETEROLOGOUS CELL
            SYSTEM
            Wetzel C.H., 1 Behrendt H.J., 1 Gisselmann G., 1 Storckhil K.F., 2 Hovemann B., 2
            Hatt H. 1 1Cell Physiology, Ruhr University, Bochum, Germany; 2Molecular Cell
            Biochemistry, Ruhr University, Bochum, Germany

P 23       306       SEQUENCE HOMOLOGY OF OLFACCTORIO RECEPTORS CLONED FROM
            MOUSE GOMERULAR TISSUE PUNCHES
            Yang X., 1 Kauer J.S., 3 Marchand J.E. 1 1Anesthesia Research, Tufts University
            School of Medicine, Boston, MA; 2Anesthesiology, New England Medical Center,
            Boston, MA; 3Neuroscience, Tufts University School of Medicine, Boston, MA

P 24       307       CORRELATION OF ODOR RECEPTOR ACTIVITIES BY COSMO-RS

XLI. Taste Pathways

P 31       308       ELECTRICAL AND CHEMICAL STIMULATION OF SPECIFIC REGIONS OF
            THE PBN ELICITS INGESTIVE OROMOTOR BEHAVIORS IN CONSCIOUS
            RATS
            King M.S., Graham J.N., Koepnick K.K., Townsend J.M., Thomas L.A.  Biology,
            Stetson University, DeLand, FL

P 32       309       EFFECTS OF GLOSSOPHARYNGEAL NERVE TRANSECTION
            AND REGENERATION ON QUININE-STIMULATED FOS-LIKE
            IMMUNOREACTIVITY IN THE PARABRACHIAL NUCLEUS OF THE RAT
            Deyrup L.D., 1 King C.T., 1 Garren M., 1 Spector A.C. 1 1Psychology, Stetson
            University, DeLand, FL; 2Psychology, Center for Smell and Taste, University of
            Florida, Gainesville, FL

P 33       310       TASTANT EVOKE ACTIVITY IN THE PRIMARY GUSTATORY NUCLEUS
            OF GOLDFISH
            Sharp A.A., Farrell W.J., Finger T.E.  Department of Cellular and Structural
            Biology, UCHSC, Denver, CO

P 34       311       CORRELATION BETWEEN THE PLASMA ZINC CONCENTRATION AND
            THE CHORDA TYMPANI NERVE RESPONSES TO VARIOUS TASTE
            STIMULI IN ZINC-DEFICIENT RATS
            Goto T., 1 Komai M., 1 Suzuki H., 1 Furukawa Y. 1 1Lab of Nutr, Grad Sch of Agr Sci,
            Tohoku University, Sendai, Japan; 2Sch of Sci and Eng, Ishinomaki-Seinsuu
            University, Ishinomaki, Japan; 3Photodynamics Res Ctr, RIKEN, Sendai, Japan

P 35       312       FOS REACTIVITY TO MSG AND SUCRrose IN SOLITARY NUCLEUS
            OF THE RAT
            Gropp J.K., 1 Stapleton J.R., 1 Barnes C.B., 2 Delay E.R. 1 1Neuroscience Program,
            Regis University, Denver, CO; 2Physical Therapy Dept., Regis University, Denver, CO

P 36       313       ALDOSTERONE ATTENUATES NACl RESPONSES IN RATS WITH
            UNILATERAL CHORDA TYMPANI SECTION
            Guagliardo N.A., April O.L., Hill D.L.  Psychology, University of Virginia,
            Charlottesville, VA

P 37       314       TEMPORAL PATTERN OF LICK-CONTINGENT ELECTRICAL
            STIMULATION IN THE NUCLEUS OF THE SOLITARY TRACT
            PREDICTS BEHAVIORAL REJECTION
Hallock R.M., Kennedy D.P., Di Lorenzo P.M. Psychology, SUNY at Binghamton, Binghamton, NY

P38 315 EFFECTS OF GLOSSOPHARYNGEAL ANESTHESIA ON TASTE RESPONSES IN THE NTS OF THE RAT
Reich C.G. Psychology, Binghamton University, Binghamton, NY

XLIII. Transduction in Sensory Cells

P39 316 POPULATION OF CHEMORECEPTORS AND CHEMOSENSITIVITY IN ADULT RED SEA BREAM PAGRUS MAJOR
Mana R.R. Lab of Fish Ethology, Kagoshima University, Kagoshima, Japan

P40 317 RECEPTOR AND SYNERGISTIC MECHANISMS FOR UMAMI AND SWEET SUBSTANCES IN WISTAR RATS

P41 318 RELATIVE EXPRESSION OF DELAYED RECTIFYING K+ CHANNEL SUBTYPES DIFFERS IN THE THREE TYPES OF LINGUAL TASTE BUDS
Nikonova L., 2 Kim I., 2 Hansen D.R., 4 Gilbertson T.A. 2 1 Biology, Utah State U., Logan, UT; 2 Pennington Biomedical Res Ctr, LSU, Baton Rouge, LA

P42 319 GLUTAMATE RECEPTOR AGONISTS AND RAT CT RESPONSES
Formaker B.K., 1 Frank M.E., 2 Roper S.D. 2, 1 UConn Health Ctr, Farmington, CT; 2 U Miami Med Sch, Miami, FL

P43 320 IMMUNOHISTOCHEMICAL LOCALIZATION OF ICTACALCIN AND CALBINDIN IN CATFISH OLFACTORY EPITHELIUM
Porta A.R. Biological Sciences, Kean University, Union, NJ

P44 321 ELECTROPHYSIOLOGICAL CHARACTERIZATION OF TASTE CELLS EXPRESSING GUSTUDUCIN
Medler K.F., 1,2 Margolskee R.F., 1 Kinnamon S.C. 1,2 1 Anatomy & Neurobiology, Colorado State University, Ft. Collins, CO; 2 Rocky Mountain Taste and Smell Center, University of Colorado Health Sciences Center, Denver, CO; 3 Howard Hughes Medical Institute, The Mount Sinai School of Medicine, New York, NY

P45 322 CARBONIC ANHYDRASE INHIBITOR, MK-927, MODULATES TASTE NERVE FIBER RESPONSES TO BASIC TASTES AND CO2 IN SD RATS
Komal M., 1 Yabuki H., 2 Suzuki H., 3,5 Bryant B.P., 4 Goto T., 1 Furukawa Y. 1 1 Grad Sch Agr Sci, Tohoku Univ, Sendai, Japan; 2 Sch Sci and Eng, Ishinomaki-Senshu Univ, Ishinomaki, Japan; 3 Photodynamics Res Ctr, RIKEN, Sendai, Japan; 4 Monell Ctr, Philadelphia, PA

P46 323 MODULATION OF BASOLATERAL NA'+H' EXCHANGE ACTIVITY IN POLARIZED TASTE RECEPTOR CELLS BY PH, CA2+ AND CAMP
Lyall V., Alam R.I., Heck G.L., DeSimone J.A. Physiology, Virginia Commonwealth University, Richmond, VA

P47 324 CALCIUM REGULATED IONIC CHANNELS IN CHEMOSENSORY NEURONS OF A FAMOUS SOIL NEMATODE
Nickell W.T., Kleene S.I. Cell Biology, Neurobiology and Anatomy, University of Cincinnati College of Medicine, Cincinnati, OH

P48 325 KNOCKOUT MOUSE MODELS FOR THE STUDY OF TASTE SIGNAL TRANSDUCTION
He W., 1,2 Rong M., 1,2 Margolskee R.F., 2,1 Damak S. 1 1 Physiology and Biophysics, Mount Sinai School of Medicine, New York, NY; 2 The Howard Hughes Medical Institute, New York, NY

P49 326 PHARMACOLOGICAL PROFILE OF TASTE-MGLUR4 DETERMINED BY EXPRESSION AND CALCIUM IMAGING IN HEK293 CELLS

Sunday, April 29, 2001

Continental Breakfast 7:30-9:00 AM

SLIDES

Sunday Morning - 8:30 AM - 10:15 AM

XLIV. Olfactory Cells and Pathways

8:30 AM 327 OMP-DIRECTED UBQUITOUS EXPRESSION OF AN ODORANT RECEPTOR IN MOUSE OLFATORY NEURONS
Zhao H., Reed R. Howard Hughes Medical Institute, Department of Molecular Biology and Genetics, Johns Hopkins School of Medicine, Baltimore, MD

8:45 AM 328 ODOR DETECTION THRESHOLDS IN MICE WITH UBQUITOUS OLFATORY EXPRESSION OF THE OR 17 RECEPTOR
Hanford L.S., 1 Slotnick B., 1 Reed R., 2 Zhao H. 2 1 Psychology, American University, Washington DC, DC; 2 Molecular Biology and Genetics, Johns Hopkins School of Medicine, Baltimore, MD

9:00 AM 329 PARALLEL ANTENNUAR CHEMOSENSORY PATHWAYS FOR ODOR-MEDIATED BEHAVIORS IN THE SPINY LOBSTER PANULIRUS ARGUS

42

43
9:15 AM 330 DISCRIMINATING ODORS THROUGH SYNCHRONY IN GLOMERULAR CIRCUITS: NEW DATA FROM MULTICHANNEL NEURAL-ENSEMBLE RECORDINGS
Christensen T.A., Lei H., Pawlowski V.M., Hildebrand J.G. Arizona Research Labs - Div. of Neurobiology, University of Arizona, Tucson, AZ

9:30 AM 331 MODULAR REPRESENTATIONS OF AROMATIC ODORANTS IN THE RAT OLFACTORY BULB
Johnson B.A., Leon M. Dept. of Neurobiology and Behavior, Univ. of California, Irvine, Irvine, CA

9:45 AM 332 OLFACTORY RECEPTOR DISTRIBUTION AND OLFACTORY BULB RECEPTIVE FIELDS IN THE SALAMANDER
Kauer J.S.,1 Yang X.,2 Marchand J.E.2 1Neuroscience, Tufts School of Medicine, Boston, MA; 2Anesthesia Research, Tufts School of Medicine, Boston, MA

10:00 AM 333 GENOMIC ANALYSIS OF THE MOUSE CHROMOSOME-6 VNO RECEPTOR GENE CLUSTER REVEALS COMMON PROMOTER MOTIFS AND A HISTORY OF LOCAL DUPLICATION
Lane R.P.,1 Cutforth T.,2 Friedman C.,1 Axel R.,2 Trask B.J.1, Hood L.3 1Fred Hutchinson Cancer Research Center, Seattle, WA; 2College of Physicians and Surgeons, Columbia University, New York, NY; 3The Institute for Systems Biology, Seattle, WA

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

SLIDES

Sunday Morning - 10:15 AM - 11:30 AM

XLVI. Olfactory Development
Chairperson: Virginia Carr

10:15 AM 334 FROM FUNCTIONAL GENOMICS TO FUNCTION OF THE GENOME IN OLFACTORY NEURON DEVELOPMENT
Cheng J.,1 Hendrich B.,2 Bird A.,2 Roskams J.I.1 1CMQT, University of British Columbia, Vancouver, BC, Canada; 2Institute of Cell and Molecular Biology, University of Edinburgh, Edinburgh, United Kingdom

10:30 AM 335 IMMUNOCYTOCHEMICAL AND MOLECULAR ANALYSIS OF OLFACTORY PROGENITOR CELLS IN VITRO
Khan M.,1 Bieri S.,1 Cunningham A.M.1,2 1Sensory Neurobiology, Garvan Institute of Medical Research, Darlinghurst, Australia; 2School of Women’s and Children’s Health, University of NSW, Sydney, Australia
MUTIPLE SYSTEM ATROPHY
Li C.,1 Mozley D.P.,1 Mozley H.M.,1 Doty R.L.1 1Smell & Taste Center, University of Pennsylvania, Philadelphia, PA; 2Departments of Radiology & Psychiatry, University of Pennsylvania, Philadelphia, PA

P6 344 ARE NONTASTERS AT RISK FOR CARDIOVASCULAR DISEASE (CVD)?
Duffy V.B.,2 Bartoshuk L.M.,2 Peterson J.M.,1 Phillips M.N.1 1Allied Health, Unv. of Connecticut, Storrs, CT; 2Surgery, Yale Univ. School of Medicine, New Haven, CT

P7 345 TASTE AND OLFACTION IN PATIENTS WITH PRIMARY HYPERPARATHYROIDISM
Quint C.,1 Temmel A.F.,1 Kou S.S.,1 Prager G.,2 Niederle B.2 1ENT, University of Vienna, Vienna, Austria; 2Surgery, University of Vienna, Vienna, Austria

P8 346 STUDIES OF OLFATORY FUNCTION IN PARKINSON’S PATIENTS RECEIVING ELECTROTHERAPY FOR CONTROL OF EXTRAPYRAMIDAL SYMPTOMS
Deems D.A.,1 Kaplan P.,2 Schumaker J.,2 Doty R.L.1 1University ENT Associates, Sarasota Memorial Hospital, Sarasota, FL; 2Neurological Associates, Sarasota Memorial Hospital, Sarasota, FL; 3Smell and Taste Center, University of Pennsylvania, Philadelphia, PA

P9 347 EFFECT OF DENTAL DEAFFERENTATION ON GUSTATORY SENSITIVITY
Boucher Y., Fahrang F., Azérad J., Faurion A. Neurobiologie Sensorielle, University Paris7, Paris, France

XLVII. Glomerular Organization

P10 348 EXPRESSION OF NEURONAL GAP JUNCTION SUBUNIT CONNEXIN 36 IN THE OLFACTORY SYSTEM
Zhang C., Restrepo D. Cellular and Structural Biology, University of Colorado Health Sciences Center, Denver, CO

P11 349 ESTIMATING THE NUMBER OF GLOMERULI IN THE HAMSTER MAIN OLFATORY BULB WITH THE PHYSICAL FRACTIONATOR
Schoenfeld T.A. Physiology, Umass Medical School, Worcester, MA

P12 350 A PREPARATION OF THE PATHWAY OF OLFATORY RECEPTOR AXONS FOR DYNAMIC IMAGING
Frontini A., Zielinski B. Biological Sciences, University of Windsor, Windsor, ON, Canada

P13 351 GUANYLYL CYCLASE-D GENE ORGANIZATION AND UPSTREAM REGULATORY ELEMENTS
Filie H.J., Gallardo E.M. Dept of Cell & Neurobiology, Keck School of Medicine, University of Southern California, Los Angeles, CA

P14 352 αCAMKII EXPRESSION PATTERNS IN THE MOUSE MAIN OLFATORY BULB

P15 353 ULTRASTRUCTURAL LOCALIZATION OF THE GAP JUNCTION PROTEIN CONNEXIN 43
Hamilton K.A., Allen D.M. Cellular Biology and Anatomy, LSU Health Sciences Center, Shreveport, LA

P16 354 DIFFERENTIAL EXPRESSION OF G-PROTEINS IN THE OLFAC
tORY SYSTEM OF A REFLEX OVULATORY, THE PINE VOLE
Williams J.S., Wekesa K.S. Biological Sciences, Alabama State University, Montgomery, AL

P17 355 LOCALIZATION OF A LECTIN TO OLFATORY NERVE ENSE
athing AND SCHWANN CELL GLIA
Lipscomb B.W., Treloar H.B., Greer C.A. Neurosurgery, Yale University, New Haven, CT

P18 356 DISTRIBUTION OF GO AND GOLF IMMUNOREACTIVITY IN THE OLFAC
tORY BULBS OF CATFISH
Anderson K.T.,1 Hansen A.,2 Morita Y.,2 Finger T.E.1 1UCSHC, Denver, CO; 2Kagawa Prefectural College of Health Sciences, Kagawa, Japan

XLVIII. Multimodal Interactions

P19 357 GUSTATORY SENSITIVITY IN PATIENTS WITH ANOSMIA
Hummel T.,1 Nesztler C.,1 Kallert S.,2 Kobal G.,2 Bende M.3 Nordin S.4 1Otorhinolaryngology, University of Dresden Medical School, Dresden, Germany; 2Pharmacology, University of Erlangen-Nurnberg, Erlangen, Germany; 3Otorhinolaryngology, Municipal Hospital, Skovde, Sweden; 4Psychology, University of Umea, Umea, Sweden

P20 358 EFFECT OF ORAL CAPSAICIN ON PERCEPTUAL RESPONSES TO TASTANTS
Simons C.T.,1 Ohmori M.,2 Cartens E.2 1Food Sci. & Tech., UC, Davis, CA; 2Neurobiol. Phys. Beh., UC, Davis, CA

P21 359 ENHANCING ATHLETIC PERFORMANCE THROUGH THE ADMINISTRATION OF PEPPERMINT ODOR
Raudenbush B.,1 Corley N.,1 Eppich W.2 1Psychology, Wheeling Jesuit University, Wheeling, WV; 2Physical Therapy, Wheeling Jesuit University, Wheeling, WV

P22 360 ODORS INFLUENCE SPEED OF TASTE NAMING
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P23 361 SENSORY FLAVOR-TEXTURE INTERACTIONS IN CUSTARD DESSERTS 
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P24 362 MISLOCALIZATION OF TASTES ACCOMPANIED BY TACTILE STIMULATION 
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P25 363 ACQUISITION OF TEXTURAL AND TEMPERATURE AVERSIONS IN RATS 
WITH PARABRACHIAL NUCLEUS LESIONS 
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P26 364 EFFECT OF ORAL STIMULATION ON POSTPRANDIAL THERMOGENESIS 
In Humans 
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P27 365 AGE-DEPENDENCY OF SUCROSE-ANALGESIA IN NEONATAL RATS 
Anseloni V.Z.,1 Weng H.M.,2 Terayama R.,2 Letizia D.,1 Ren K.,1 Davis B.J.,1 
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P28 366 A REVIEW OF THE INFLUENCES OF CARDIOVASCULAR AGENTS ON 
TASTE AND SMELL PERCEPTION 
Reddy K.P., Doty R.L. Smell & Taste Center, University of Pennsylvania, 
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XLIX. Functional Characteristics of Sensory Cells

P31 367 THE SEPTAL ORGAN, AN ATTRACTIVE MODEL SYSTEM FOR 
OLFACTORY CODING STUDY 
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P32 368 RESPONSES OF SINGLE CHORDA TYMPANI TASTE FIBERS OF THE CALF 
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P33 369 ELECTRICAL PROPERTIES OF FOUR TYPES OF CELLS IN THE BULLFROG 
FUNGIFORM PAPILLAE 
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L. Taste Cells

P34 370 IS ROMK1 (K\textsubscript{a}1.1) THE ELUSIVE APICAL K\textsuperscript{+} CHANNEL IN MAMMALIAN 
TASTE CELLS? 
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P35 371 LONG TERM RECORDINGS FROM SINGLE CHORDA TYMPANI NERVE 
FIBERS IN THE RAT 
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P36 372 ELECTROPHYSIOLOGICAL AND CHEMOSENSORY PROPERTIES OF 
CULTURED TRIGEMINAL NEURONS 
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P37 373 "EXPOSURE TO ODORS OR THE PDE4 INHIBITOR ROLIPRAM INDUCES 
PHOSPHORYLATION OF CREB IN THE MOUSE OLFACTORY BULB 
Pho V., Cherry J.A. Psychology, Boston University, Boston, MA

P38 374 INHIBITORY ODOR RESPONSES RECORRED EXTRACELLULARLY FROM 
TOAD OLFACTORY EPITHELIUM 
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Millennium Institute for Advanced Studies in Cell Biology and Biotechnology, 
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P39 375 THE USE OF FRESH CADAVERIC HUMAN OLFACTORY EPITHELIUM FOR 
PHYSIOLOGICAL STUDY 
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P40 376 KERATIN 18 EXPRESSION IN LIGHT CELLS OF RAT TASTE BUDS 
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P41 377 IMMUNOHISTOCHEMICAL AND ULTRASTRUCTURAL STUDIES OF PGP 
9.5 IN THE TASTE BUDS OF RAT CIRCUMVALLATE PAPILLAE 
Yang R.,1 Yee C.,2,3 Stoick C.L.,1,2 Finger T.E.,3,4 Kinnaman J.C.1,2 1Dept. 
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P42 378 BONE MORPHOGENIC PROTEIN 4 (BMP-4) IS PRESENT IN TASTE CELLS 
OF ADULT MICE 
Yee C.L., Finger T.E. Cellular and Developmental Biology, UCHSC, Denver, CO

P43 379 IMMUNOCYTOCHEMICAL ANALYSIS OF TASTE CELLS INFECTED WITH 
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VIRAL VECTORS
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P44 380 GUSTDUCIN IMMUNOREACTIVE TASTE CELLS IN MOUSE CIRCUMVALLATE PAPILAE DO NOT EXPRESS SNAP-25 Strick C.L.,1,2 Yang R.,1,2 Kinnamon J.C.1,2 1Biological Sciences, University of Denver, Denver, CO; 2Rocky Mountain Taste and Smell Center, Denver, CO

P45 381 CLONING OF FUCOSYLTTRANSFERASES RELATED TO LEU59 FROM A RAT TASTE ENRICHED CDNA LIBRARY Pumplin D.W. Anatomy/Neurobiology, Univ. of Maryland, Baltimore, Baltimore, MD

P46 382 CHARACTERISTICS OF FUNGIFORM TASTE BUDS AND CELLS 7-17 DAYS FOLLOWING EXPOSURE TO B-RADIATION Nelson G.M. Pathology/Division of Neuropathology, University of Alabama at Birmingham, Birmingham, AL

P47 383 AMINO ACID IMMUNOREACTIVITY OF CHANNEL CATFISH PERIPHERAL TASTE SYSTEM Bramer M., Michel W.C. Physiology, University of Utah School of Medicine, Salt Lake City, UT

LI. Second Messengers

P48 384 CHEMORESPONSE IN PARAMECIUM: INVOLVEMENT OF THE CALCIUM PUMP Gannon-Murakami L.,1 Yano J.,1 Raokchy V.,1 Preston R.R.,2 Van Houten J.L.1 1Biology, University of Vermont, Burlington, VT; 2Pharmacology and Physiology, MCP Hahnemann Univ, Philadelphia, PA

P49 385 CHEMOSIGNAL TRANSDUCTION IN THE VOMERONASAL ORGAN OF GARTER SNAKES: CHEMOATTRACTANT-INDUCED IP3-MEDIATED CALCIUM RELEASE Cinelli A.R.,1 Wang D.,1 Chen P.,1 Liu W.,4 Halpern M.5 1Anatomy and Cell Biology, SUNY Downstate, Brooklyn, NY; 2Biochemistry, SUNY Downstate, Brooklyn, NY; 3Biochemistry, SUNY Downstate, Brooklyn, NY; 4Anatomy and Cell Biology, SUNY Downstate, Brooklyn, NY; 5Anatomy and Cell Biology, SUNY Downstate, Brooklyn, NY

P50 386 PHYSIOLOGICAL, AND PHARMACOLOGICAL EVIDENCE FOR ODOR STIMULATED PHOSPHATIDYLINOSITOL 3-KINASE IN LOBSTER OLFATORY RECEPTOR NEURONS Herity J.D.,1,2 Zhanzarov A.B.,1 Doolin R.E.,1 Acbe B.W.1,2 Whitney Laboratory, St. Augustine, FL; 3Neuroscience, University of Florida, Gainesville, FL; 4Zoology, University of Florida, Gainesville, FL

P51 387 IMMUNOHISTOCHEMICAL IDENTIFICATION OF COMPONENTS OF THE CHEMOATTRACTANT SIGNAL TRANSDUCTION PATHWAY IN VOMERONASAL BIPOLAR NEURONS OF GARTER SNAKES Wang D.,1 Jia C.,2 Chen P.,2 Halpern M.4 1Biochemistry, SUNY Downstate Medical Center, Brooklyn, NY; 2Anatomy and Cell Biology, SUNY Downstate Medical Center, Brooklyn, NY; 3Biochemistry, SUNY Downstate Medical Center, Brooklyn, NY; 4Anatomy and Cell Biology, SUNY Downstate Medical Center, Brooklyn, NY

P52 388 SIGNAL TRANSDUCTION PATHWAYS IN ODORA CELLS Liu G., Badau R.M., Talamo B.R. Neuroscience, Tufts U. Medical School, Boston, MA

P53 389 TRP-T, A NOVEL TRP RELATED PROTEIN EXPRESSED IN TASTE RECEPTOR CELLS Perez C.A.,1,2 Huang L.,1,2 Rong M.,1,2 Kozak J.A.,1,2 Max M.,3 Margoskie R.F.1,2 HHMI, Mount Sinai School of Med., New York, NY; 3Physiology & Biophysics, Mount Sinai School of Med., New York, NY; 4University of California, Irvine, CA

P54 390 SIGNALING COMPONENTS OF THE IP3 PATHWAY IN RODENT TASTE CELLS Clapp T.R.,1,2 Stone L.M.,1,2 Margoskie R.F.,3 Kinnamon S.C.1,2 1Anatomy/Neurobiology, Colorado State University, Fort Collins, CO; 2Rocky Mountain Taste and Smell Center, University of Colorado Health Sciences Center, Denver, CO; 3Howard Hughes Medical Institute, The Mount Sinai School of Medicine, New York, NY

P55 391 MIXTURE SUPPRESSION AND ODOR SUPPRESSION OF CAMP-INDUCED CURRENT IN OLFATORY RECEPTOR NEURONS Yamada H., Nakatani K. Biological Sciences, University of Tsukuba, Tsukuba, Japan

P56 392 IMMUNOLOCALIZATION OF INOSITOL TRISPHOSPHATE RECEPTORS IN MOUSE VOMERONASAL OLFACTORY EPITHELIUM Lin W.,1,2 Restrepo D.1,2 Cellular and Structural Biology, University of Colorado HSC, Denver, CO; 2Rocky Mountain Taste and Smell Center, University of Colorado HSC, Denver, CO

P57 393 ODOR RECEPTOR GENE EXPRESSION AND G PROTEINS IN THE OLFATORY SYSTEM OF THE GOLDFISH Birkholz D.A., Anderson K.T., Finger T.E. Dept. Cellular & Structural Biology,
IMMUNOHISTOCHEMICAL AND ULTRASTRUCTURAL IDENTIFICATION OF G-PROTEINS IN THE OLFATORY EPITHELIUM OF CATFISH
Hansen A., Anderson K.T., Finger T.E. UCHSC, Denver, CO

RECONSTITUTION OF AN OLFACTORY RECEPTOR-ACTIVATED cAMP SIGNALLING PATHWAY IN A MAMMALIAN CELL LINE
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