NEXT MEETING

April 27–May 1
1983
Sarasota

Program

4th Annual Meeting Association for Chemoreception Sciences

April 14-18,1982
Sarasota, Florida

THE ASSOCIATION FOR CHEMORECEPTION SCIENCES

FOURTH
ANNUAL
MEETING

SARASOTA
FLORIDA
April 14 - 18, 1982

The Association for Chemoreception Sciences
Fourth Annual Meeting Program

WEDNESDAY EVENING, APRIL 14

7:00 - 10:00 pm **Registration,** Hyatt Sarasota Lower Lobby

THURSDAY MORNING, APRIL 15

8:00 - 11:00 am Registration continues in Lower Lobby

8:30 - 10:30 am **Session 1. Morphology I, room** Hernando DeSoto, South
Chair: **W.B. Stewart**

1. The ontogeny of the fly's taste hairs. **K. Hansen, E. Hansen-Delkeskamp** and **G. Waldhorst,** *University of Regensburg, West Germany.*
2. Scanning and transmission electron microscopy of the olfactory rosette of the Brown Trout. **J.C. Rowley III** and **D.T. Moran,** *University of Colorado School of Medicine, Denver, CO.*
3. An ultrastructural study of olfactory receptor differentiation in embryonic rainbow trout, *Salmo gairdneri.* **B. Zielinski** and **T.J. Hara,** *University of Manitoba, Canada.*
4. Fluorescent studies of the frog's olfactory epithelium. **D.B. Michael** and **T.V. Getchell,** *Wayne State University School of Medicine, Detroit, MI.*
5. Recovery processes of frog olfactory epithelium following $ZnSO_4$ treatment. **G.D. Adamek** and **R.C. Gesteland,** *Northwestern University, Evanston, IL.*
6. Radioimmunoassay of olfactory marker protein in organ cultures of rat olfactory tissues. **M.I. Chuah** and **A.I. Farbman,** *Northwestern University, Evanston, IL.*
7. The ultrastructure of the nasal mucosa in man: Respiratory and olfactory epithelium. **D.T. Moran, J.C. Rowley III** and **B.W. Jafek,** *University of Colorado School of Medicine, Denver, CO.*
8. Intranasal photography and its uses in clinical nasal studies. **D. Leopold,** *Upstate Medical Center, Syracuse, NY.*

10:30 - 11:00 am **Coffee Break**

11:00 am - 12:30 pm **Session 2. Morphology II, room** Hernando DeSoto, South
Chair: **T.V. Getchell**

1. Common chemical sense in the fish, *Prionotus:* Spinal sensory pathways and neuropeptides. **T.E. Finger,** *University of Colorado Medical School, Denver, CO.*
2. Sensory deprivation affects the synapses but not the size or number of mitral cells. **T.E. Benson** and **J.W. Hinds,** *Yale University School of Medicine, New Haven, CT.* and *Boston University School of Medicine, Boston, MA.*

3. Mitral cell degeneration in the neurologically mutant mouse PCD. **C.A. Greer** and **G.M. Shepherd,** *Yale University School of Medicine, New Haven, CT.*
4. Intracellular filling of mitral and tufted cells with horseradish peroxidase confirms their identification by antidromic activation. **S.P. Schneider, J.W. Scott** and **E. Orona,** *Emory University, Atlanta, GA.*
5. Transsynaptic control of substance P and dopamine expression in the main olfactory bulb of the hamster. **B.J. Davis, F. Macrides, R. Kream, T. Kawano** and **F.L. Margolis.** *Worcester Foundation for Experimental Biology, Shrewsbury, MA. and Roche Institute of Molecular Biology, Nutley, N.J.*
6. Neurons in olfactory cortex project to two principal thalamic nuclei. **J.L. Price** and **B.M. Slotnick,** *Washington University and The American University, Washington, D.C.*

THURSDAY AFTERNOON, APRIL 15

2:00 - 3:30 pm **Session 3. Structure-Activity Relationships I, room** Hernando DeSoto, South
Chair: **B. Mookerjee**

1. Influence of solvent properties on magnitudes of the taste response. **I.J. Miller, Jr.,** *Bowman Gray School of Medicine, Winston-Salem, NC.*
2. Evidence for an amiloride-sensitive ion channel in canine lingual epithelium. **J.A. DeSimone, G.L. Heck** and **S.K. DeSimone,** *Medical College of Virginia, Richmond, VA.*
3. Fluorescent monitoring of ion-taste epithelial interactions. **J.G. Brand, S.J. Kron** and **D.M. Senseman,** *Monell Chemical Senses Center and University of Pennsylvania, Philadelphia, PA.*
4. Persistence of sweetness and salivary concentrations of sweeteners: Evidence for localised concentration. **G.G. Birch, K. O'Donnell** and **P. Cherdkiatgumchai,** *University of Reading, England.*
5. Ingestion of glucose, 3-0-methyl glucose and 2-deoxy-d-glucose in the rat. **R.J. DiRocco,** *Monell Chemical Senses Center, Philadelphia, PA.*
6. Qualities of toxic compounds in the rodent taste system. **C.N. Stewart** and **R.F. Reidinger, Jr.,** *Franklin & Marshall College, Lancaster, PA. and U.S. Fish and Wildlife Service, Philadelphia, PA.*

3:30 - 4:30 pm **Coffee Break**

4:00 - 5:30 pm **Session 4. Structure-Activity Relationships II, room** Hernando DeSoto, South
Chair: **T.J. Caprio**

1. Biochemical studies with heterocyclic odorants. **P. Wood** and **G. Dodd,** *University of Warwick, Warwick, England.*
2. Specific inhibition of the EOG of isovaleric acid and related "sweaty" odorants in the rat. **E. Polak, S. Shirley** and **G. Dodd,** *University of Warwick, Warick, England.*
3. Effect of chemical and physical modifications on the assay of an oyster drill chemotactic response. **D. Kieber, D. Rittschof** and **R.G. Shepherd,** *University of Delaware, Lewes, DE.*

4. Effects of trypan blue and aniline on development, hatching, and prey chemoreception of the predatory muricid gastropod, *Urosalpinx cinerea*. **G.L. Gruber, A.B. Ducharme** and **D. Rittschof,** *University of Delaware, Lewes, DE.*

5. Isolation, purification, and characterization of a peptide marine phagoattractant. **R.G. Shepherd, K. Mopper** and **D. Rittschof,** *University of Delaware, Lewes, DE.*

6. A chemical characterization of the freshwater attractants of the American eel. **P.W. Sorensen,** *University of Rhode Island, Narragansett, R.I.*

THURSDAY EVENING, APRIL 15

Stanley K. Freeman Award Dinner

6:30 - 7:30 pm Cocktails (cash bar), **room** Gallery

7:30 pm Dinner, **room** Hernando DeSoto
Speaker: **Lewis Thomas, MD**
Chancellor, Memorial Sloan-Kettering Cancer Center, New York, NY.

FRIDAY MORNING, APRIL 16

8:30 - 10:30 am **Session 5. Physiology of Chemoreception, room** Hernando DeSoto, South
Chair: **M.E. Frank**

1. Hormone-induced changes in peripheral receptor sensitivity. **E.E. Davis,** *SRI International, Menlo Park, CA.*

2. Role of afferent synapses in coding sensory messages in multimodal neural pathways. **B. Jahan-Parwar,** *Worcester Foundation for Experimental Biology, Shrewsbury, MA.*

3. Salt taste responses in rats depleted of NaCl during early development. **R.M. Bradley, D.L. Hill** and **C.M. Mistretta,** *University of Michigan, Ann Arbor, MI.*

4. Developmental changes in salt taste responses from sheep glossopharyngeal nerve. **C.M. Mistretta** and **R.M.Bradley,** *University of Michigan, Ann Arbor, MI.*

5. Gustatory neural activity in adrenalectomized rats. **T. Kosten** and **R.J. Contreras,** *Yale University, New Haven, CT.*

6. Inhibition of the gerbil's electrophysiological sweetener taste response by methyl 4,6-dichloro, 4,6-dideoxy alpha-d-galactopyranoside. **W. Jakinovich,** *Herbert H. Lehman College, Bronx, NY.*

7. Assessment of concentration discriminating potential in rat NTS and its relevance to the labeled-line/across-fiber pattern issue. **F.W. Maes** and **R.P. Erickson,** *Duke University, Durham, NC.*

8. Chemosensitivity of rat trigeminal receptors to nine odorants commonly used in olfactory research. **W.L. Silver** and **D.G. Moulton,** *University of Pennsylvania School of Medicine, Philadelphia, Pa.*

10:30 - 11:00 am **Coffee Break**

11:00 am - 12:45 pm **Session 6. Chemosensation and Perception, room** Hernando DeSoto, South
Chair: **C.L. Murphy**

1. Perception of nasal pungency in smokers and nonsmokers. **J.E. Cometto-Muniz** and **W.S. Cain,** *John B. Pierce Foundation Laboratory and Yale University, New Haven, CT.*

2. Misadventures in physiologizing: Adaptation and taste mixology. **H. Lawless,** *Monell Chemical Senses Center, Philadelphia, PA.*

3. Individual differences in sensitivity to androstenone are genetically determined. **C.J. Wysocki, G.K. Beauchamp, C. Calloway, B. Dupont** and **M.S. Pollack,** *Monell Chemical Senses Center, Philadelphia, PA. and Sloan Kettering Institute for Cancer Research, New York, NY.*

4. Olfactory testing in the clinic: Final development of the University of Pennsylvania Smell Identification Test (UPSIT). **R.L. Doty, P. Shaman** and **M. Dann,** *University of Pennsylvania, Philadelphia, PA.*

5. Pleasantness of odors: Some psychometric observations with odorants presented by microencapsulation. **R.G. Davis,** *Veterans Administration Medical Center, Lexington, KY.*

6. Recognition memory for odors: The role of perceptual identity. **M.D. Rabin** and **W.S. Cain,** *John B. Pierce Foundation Laboratory and Yale University, New Haven, CT.*

7. The psychological effects arising from administration of the odours androstanone and androstenone in the laboratory setting. **C. Van Toller,** *University of Warwick, England.*

FRIDAY AFTERNOON, APRIL 16

2:15 - 3:15 pm **General Business Meeting of the Association room** Hernando DeSoto, South

3:15 - 3:30 pm **Coffee Break**

3:30 - 6:00 pm **Symposium I. Development of the Chemical Senses - Taste and Smell, room** Hernando DeSoto, South
Chair: **Charlotte Mistretta** and **A.I. Farbman**
Participants:
David Hill, *University of Michigan, Ann Arbor, MI,* Development of Taste Function
Robert G. Mair, *V.A. Hospital, Providence, RI,* Development of Olfactory Sensation
Michael Shipley, *Northwestern University, Chicago, IL,* Development of Central Connections in the Olfactory and Limbic Systems

FRIDAY EVENING, APRIL 16

8:00 - 10:30 pm **Symposium II. David G. Moulton Memorial Symposium. Olfactory Coding Mechanisms, room** Hernando DeSoto, South

Chair: **Richard L. Doty**

Participants:

John L. Kubie, *Downstate Medical Center, SUNY. Brooklyn, NY.*

Alan Mackay-Sim, *University of Wyoming, Laramie, WY.*

John S. Kauer, *Yale University School of Medicine, New Haven, CT.*

Michael Meredith, *Florida State University, Tallahassee, FL.*

Discussant: **Maxwell M. Mozell,** *Upstate Medical Center, SUNY, Syracuse, NY.*

This symposium, in honor of the late David G. Moulton, summarizes and evaluates his contributions and those of his students in the area of olfactory coding mechanisms, particularly those related to the notion that olfactory quality may be coded, in part, by spatial patterns developed within the olfactory system. John Kubie will provide an introduction to the notion of spatial coding within the olfactory system and will summarize his work, carried out in conjunction with David Moulton, on the anterior/posterior distribution of receptive fields in the sensory epithelium. Alan Mackay-Sim will review his own work, carried out with David Moulton and Muriel Nathan, on regional analyses of the responsiveness of the olfactory epithelium to specific odorants. John Kauer will review his own work related to spatial coding at the bulbar level, followed by Michael Meredith's presentation on temporal coding mechanisms in the olfactory system and speculations on olfactory coding in general. Maxwell Mozell will serve as discussant for this symposium, summarizing the aforementioned presentations and discussing the relation of his work to that presented by the participants.

SATURDAY MORNING, APRIL 17

8:30 - 10:30 am **Session 7. Behavioral Regulation by Chemosensory Stimuli, room** Hernando DeSoto, South

Chair: **B.M. Wenzel**

1. A 2-DG study of behavioral plasticity in odor dependent suckling. **P.E. Pedersen, C.A. Greer, W.B. Stewart** and **G.M. Shepherd,** *Yale University School of Medicine, New Haven, CT.*
2. Maturation of olfactory exploration in hamsters is correlated with late afferentation of the olfactory tubercle. **T.A. Schoenfeld** and **J.V. Corwin,** *University of Florida College of Medicine, Gainesville, FL.*
3. An effect of differences in major histocompatibility types on the incidence of pregnancy block in mice. **K. Yamazaki, G.K. Beauchamp, C.J. Wysocki** and **E.A. Boyse,** *Monell Chemical Senses Center, Philadelphia, PA. and Memorial Sloan-Kettering Cancer Center, New York, NY.*
4. Source of biologically significant odors in cavy (C. aperea) perineal gland secretions. **I.G. Martin, J.M. Zechman, J.L. Wellington** and **G.K. Beauchamp,** *Monell Chemical Senses Center, Philadelphia, PA.*
5. Factors influencing expression of conditioned flavor aversions in grooming. **J.R. Mason** and **R.F. Reidenger, Jr.,** *Monell Chemical Senses Center, Philadelphia, PA.*
6. Investigation of and preference for conspecific odors by gerbils treated with psychotropic drugs. **M. Cheal,** *McLean Hospital and Harvard Medical School, Belmont, MA.*
7. Species differences in testosterone effects on social odor investigation. **C.A. Cornwell-Jones** and **K.R. Zahs,** *Princeton University, Princeton, NJ.*
8. Age dependent changes in scent mark constituents of a primate, the tamarin *Saguinus fuscicollis.* **A.M. Belcher, G. Epple, J.G. Kostelc** and **A.B. Smith, III,** *Monell Chemical Senses Center and University of Pennsylvania, Philadelphia, PA.*

10:30 - 11:00 am **Coffee Break**

11:30 am - 12:30 pm **The Fourth Annual Givaudan Lecture, room** Hernando DeSoto, South

This year's speaker is **Dr. Carl Pfaffmann,** Vincent and Brooke Astor Professor, Rockefeller University. His lecture is entitled "De Gustibus, Praeteritus, Praesens, Futurus."

SATURDAY AFTERNOON, APRIL 17

12:30 - 2:00 pm **Luncheon, Poolside**

SATURDAY EVENING, APRIL 17

7:00 - 9:00 pm Screening of a new series of short, educational films on the human senses, **room** Gallery

7:00 - 11:00 pm **Session 8. Posters I, room** Hernando DeSoto, North

Chair: **D. Hornung**

1. Clinical evaluation of olfaction. **W.S. Cain, J.F. Gent** and **K. Friend.** *J.B.Pierce Foundation Laboratory and Yale University, New Haven, CT.*
2. Odor perception in children in relation to nasal obstruction. **R.L. Doty, S.N. Ghorbanian** and **J.L. Paradise,** *University of Pennsylvania, Philadelphia, PA and University of Pittsburgh, Pittsburgh, PA.*
3. Empirical evaluation of head-space concentrations of sniff bottles using laser-induced fluorimetry and multiphoton ionization procedures. **M.M. Doxtader, R.L. Doty** and **M. Topp,** *University of Pennsylvania, Philadelphia, PA.*
4. A clinical test for olfaction. **M.R. Garcia-Medina,** *University of Buenos Aires, Argentina.*

5. Clinical evaluation of taste: Three case studies. **J.F. Gent, L.M. Bartoshuk, J. Hooper** and **J. Seibyl,** *John B. Pierce Foundation Laboratory, New Haven, CT.*

6. Characteristics of patients with taste and smell disorders. **R.B. Goodspeed, F.A. Catalanotto, L. Bartoshuk, W. Cain, J. Gent, J. Donaldson, G. Snyder, L. Allen, K.M. Ostrom, J. Schlitzer, M.J. Schierberl** and **N. Ryan,** *University of Conn. Health Center, Farmington, CT. and Yale University, New Haven, CT.*

7. Chemosense disturbance in melancholia: Preliminary results of a questionnaire study. **L.D. King** and **N. Lhor,** *University of Michigan Medical Center, Ann Arbor, MI.*

8. Salt taste responsiveness and preference among normotensive, prehypertensive and hypertensive adults. **R.D. Mattes, S.K. Kumanyika** and **B.P. Halpern,** *Cornell University, Ithaca, NY.*

9. Differential diagnosis in acute renal failure: Evaluation of a "sniff" test. **C. Murphy** and **J.S. Madowitz,** *Monell Chemical Senses Center and Temple University Hospital, Philadelphia, PA.*

10. Glucose insensitivity in relatives of diabetics. **R.G. Settle,** *Philadelphia VA Medical Center, Philadelphia, PA.*

11. Distance chemoreception in adult *Stylochus ellipticus.* **P. Daniel, D. Rittschof** and **T. Cole,** *University of Maryland, Cambridge, MD and University of Delaware, Lewes, DE.*

12. Postnatal caffeine exposure through maternal diet: Effects on caffeine preference and developmental measures in rats. **F. Ferrell** and **L. Gullberg,** *University of California, Davis, CA.*

13. Bile acids as olfactory and taste stimuli for rainbow trout. **T.J. Hara, T. Marui** and **R.E. Evans,** *Freshwater Institute, Winnipeg, Canada and Kagoshima University School of Dentistry, Kagoshima, Japan.*

14. Further evidence for olfactory behavior in procellariiform birds. **L.V. Hutchison, B.M. Wenzel** and **K.E. Stager,** *University of California, Los Angeles, CA.*

15. Odor detection thresholds in the rat for the vapors of three related perfluorocarbons and ethylene glycol. **D.A. Marshall, R.L. Doty, D.P. Lucero** and **B.M. Slotnick,** *University of Pennsylvania, Philadelphia, PA, Aerospace Corp., Washington, DC, and American University, Washington, DC.*

16. Behavioral bioassay as a sensitive indicator of sublethal effects of marine pollutants. **C. Merrill,** *University of Delaware, Lewes, DE.*

17. Prey odors and phagoattractant thresholds in oyster drills. **D. Rittschof, C. Merrill, D. Kieber** and **A. Ducharme,** *University of Delaware, Lewes, DE.*

18. Fine-grained measurement of canine consummatory behavior. **J.C. Smith, M.E. Rashotte, T.A. Austin, R.P. Henderson** and **G.K. Oliff,** *Florida State University, Tallahassee, FL.*

19. Rapid recovery from taste aversion as the result of postconditioning forced taste experience. **A.C. Spector, J.C. Smith** and **G.R. Hollander,** *Florida State University, Tallahassee, FL.*

20. Responses of olfactory bulb units in channel catfish to amino acids. **H. Thompson** and **J. Caprio,** *Louisiana State University, Baton Rouge, LA.*

21. Degeneration of the distal stump of the olfactory nerve severed from the cell bodies. **P. Cancalon,** *Florida State University, Tallahassee, FL.*

22. Changes in olfactory epithelium following bulbectomy in hamster. **R.M. Costanzo** and **P.P.C. Graziadei,** *Medical College of Virginia, Richmond, VA and Florida State University, Tallahassee, FL.*

23. EOG variations during $ZnSO_4$ induced degeneration and subsequent regeneration of olfactory receptors in the channel catfish. **J.R. Erickson** and **J. Caprio,** *Louisiana State University, Baton Rouge, LA.*

24. Topographic and structural changes of mitral cells following subtotal bulb removal. **P.P.C. Graziadei** and **G.A. Monti Graziadei,** *Florida State University, Tallahassee, FL.*

25. Aberrant olfactory projection to the telencephalon in a bullfrog. **P.P.C. Graziadei** and **M.M. Mozell,** *Florida State University, Tallahassee, FL and Upstate Medical Center, Syracuse, NY.*

26. Receptor cell contribution to olfactory mucosal odorant uptake. **D.E. Hornung, S.L. Youngentob** and **M.M. Mozell,** *St. Lawrence University, Canton, NY and Upstate Medical Center, Syracuse, NY.*

27. Early IXth nerve removal prevents development of rat vallate taste buds. **M.A. Hosley** and **B. Oakley,** *University of Michigan, Ann Arbor, MI.*

28. Topographic relations are maintained in the projection from the olfactory epithelium to the bulb in the salamander. **A. Mackay-Sim** and **M.H. Nathan,** *University of Wyoming, Laramie, WY and University of Pennsylvania, Philadelphia, PA.*

29. Topographic coding of odorant quality is maintained at different concentrations in the salamander epithelium. **A. Mackay-Sim** and **P. Shaman,** *University of Wyoming, Laramie, WY and University of Pennsylvania, Philadelphia, PA.*

30. Characterization of olfactory fiber bundles in the lamina propria of salamander olfactory epithelium. **T.E. O'Hara, Jr., J.A. Rafols** and **T.V. Getchell,** *Wayne State University School of Medicine, Detroit, MI.*

31. The effect of intranasal zinc sulfate treatment on suckling behavior and odor-induced activity in the neonatal rat olfactory bulb. **W.B. Stewart, C.A. Greer** and **M.H. Teicher,** *Yale University School of Medicine, New Haven, CT.*

32. The functional and histological maturation of a modified glomerular complex in the neonatal rat olfactory bulb. **W.B. Stewart, C.A. Greer, M.H. Teicher, P.E. Pedersen** and **G.M. Shepherd,** *Yale University School of Medicine, New Haven, CT.*

33. Developing olfactory circuits: AChE-containing cells demonstrated by olfactory bulbectomy. **C.R. Wirsig, J. Morasco** and **C.M. Leonard,** *University of Florida, Gainesville, FL.*

SUNDAY MORNING, APRIL 18

8:30 am - 12:00 pm **Session 9. Posters II, room** Hernando DeSoto, North
Chair: **J. Teeter**

1. Chemosensory inhibitors produced by blue mussels. **A.B. Ducharme** and **D. Rittschof,** *University of Delaware, Lewes, DE.*
2. Preliminary characterization of response-eliciting components of earthworm extract: A new bioassay. **M. Halpern, L. Reformato** and **D.M. Kirschenbaum,** *Downstate Medical Center, Brooklyn, NY.*
3. Taste responses to amino acids in rainbow trout: Evidence for multiple receptor sites from kinetic analysis and cross-adaption. **T.J. Hara** and **T. Marui,** *Freshwater Institute, Winnipeg, Canada and Kagoshima University School of Dentistry, Kagoshima, Japan.*
4. Temporal coding does not account for salt taste quality discrimination in blowfly. **F.W. Maes,** *State University Groningen, The Netherlands.*
5. Conditioned odor aversions in starlings mediated by the trigeminal system. **J.R. Mason** and **W.L. Silver,** *Monell Chemical Senses Center, Philadelphia, PA.*
6. A computerized apparatus for determining the olfactory prowess of small animals. **R.J. O'Connell, J.C. Walker, D.M. Marques** and **S. Parker,** *The Worcester Foundation for Experimental Biology, Shrewsbury, MA.*
7. Interstrain differences in bitter taste responses in mice. **T. Shingai** and **L.M. Beidler,** *Florida State University, Tallahassee, FL.*
8. Information transmission in tarsal sugar receptors of the blowfly. **D.V. Smith, E. Bowdan** and **V.G. Dethier,** *University of Wyoming, Laramie, WY and University of Massachusetts, Amherst, MA.*
9. Modeling the convergence of gustatory neurons. **S.L. Bieber** and **D.V. Smith,** *University of Wyoming, Laramie, WY.*
10. Histamine response by the protozoan *Tetrahymena thermophila.* **T. Cheng** and **M. Levandowsky,** *Pace University, New York, NY.*
11. Converging taste receptor inputs to the hamster solitary nucleus. **J.D. Dickman, R.D. Sweazey** and **D.V. Smith,** *University of Wyoming, Laramie, WY.*
12. Taste coding of ethyl alcohol: Electrophysiological and behavioral data. **P.M. Di Lorenzo, S.W. Kiefer, A.G. Rice** and **J. Garcia,** *University of California, Los Angeles, CA.*
13. Taste adaptation in the hamster chorda tympani. **J.F. Gent** and **M.E. Frank,** *John B. Pierce Foundation Laboratory, New Haven CT and University of Connecticut Health Center, Farmington, CT.*
14. Response properties of hamster pontine taste neurons to a broad range of sapid stimuli. **J.M. Gill II, M. Conley, F.W. Maes** and **R.P. Erickson,** *Duke University, Durham, NC.*

15. Chemical characterization of the sex pheromone of *Callinected sapidus:* Initial results. **R.A. Gleeson** and **M.A. Adams,** *Monell Chemical Senses Center, Philadelphia, PA and University of Florida, St. Augustine, FL.*
16. Neurophysiological and morphological differences in pheromone sensitive chemosensilla of *Trichoplusia ni.* **A. Grant, R.W. Mankin, M. S. Mayer** and **R.J. O'Connell,** *The Worcester Foundation for Experimental Biology, Shrewsbury, MA and USDA, Gainesville, FL.*
17. Effect of stimulus complexity on the response of morphologically-identified central olfactory neurons. **K.A. Hamilton** and **B.W. Ache,** *University of Florida, St. Augustine, FL.*
18. Electric taste stimulation: Neural evidence. **M.S. Herness,** *Florida State University, Tallahassee, FL.*
19. Developmental changes in taste responses from rat solitary nucleus. **D.L. Hill, C.M. Mistretta** and **R.M. Bradley,** *University of Michigan, Ann Arbor, MI.*
20. Suppression of bitterness of QHCl in mixtures: Possible mechanisms. **L.M. Bartoshuk** and **J.P. Seibyl.** *John B. Pierce Foundation Laboratory, New Haven, CT.*
21. Changes in olfaction with age. **A. Billing, S. Van Toller** and **G. Dodd,** *University of Warwick, England.*
22. Influence of varying concentration, temperature and duration of stimuli on gustatory persistence. **A.M. Calvino,** *LIS, University of Buenos Aires, Argentina.*
23. Salivary sodium levels and salt perception. **C. Christensen, M. Bertino, G. Beauchamp** and **M. Navazesh,** *Monell Chemical Senses Center, Philadelphia, PA.*
24. Communication of gender from human breath odors: Relationship to perceived intensity and pleasantness. **R.L. Doty, P.A. Green, C. Ram** and **S.L. Yankell,** *University of Pennsylvania, PA.*
25. PTC: Considerations in threshold determination of taste status. **J.E. Hooper, J.F. Gent,** and **L.M. Bartoshuk,** *John B. Pierce Foundation Laboratory, New Haven, CT.*
26. Use of the signal detection paradigm in the study of chemoreception. **D.W. Ingersoll,** *Fordham University, Bronx, NY.*
27. Application of generalized Procrustes analysis to sensory profile data. **S. Langron,** *Long Ashton Research Station, Bristol, England.*
28. Bitterness as a potential deterrent to accidental ingestions of toxic household substances by toddlers. **H. Lawless, M. Corina** and **L. Hammer,** *Monell Chemical Senses Center and The Children's Hospital of Philadelphia, Philadelphia, PA.*
29. Simultaneous recording of taste intensity and parotid flow in response to salt and to acid stimuli. **R.M. Pangborn, C.M. Chung,** and **M.B. Norris,** *University of California, Davis, CA.*
30. Color modification of odor/flavor perception in microencapsulated odors, aqueous solutions, and milk drinks. **R.M. Pangborn, D.A. Vargo** and **L.L. Ringo,** *University of California, Davis, CA.*

31. Measurement of olfactory sensitivity in human beings. **M.D. Rabin, R. Isseroff** and **W.S. Cain,** *John B. Pierce Foundation Laboratory and Yale University, New Haven, CT.*

32. Effects of gymnemic acid concentration and time since exposure on intensity of simple tastes: A test of the biphasic model for the action of gymnemic acid. **D.R. Riskey, J.A. Desor** and **D. Velluci,** General Foods Technical Center, Tarrytown, NY.

33. Chemosensory properties of acids. **R.G. Settle** and **K. Meehan,** *University of Pennsylvania and VA Medical Center, Philadelphia, PA.*

34. Stimulus volume and taste detection thresholds. **J.M. Weiffenbach** and **R. Taylor,** *National Institute of Dental Research, Bethesda, MD.*

35. Flavor interaction between monosodium glutamate and sodium chloride. **S. Yamaguchi, H. Furukawa** and **C. Takahashi,** *Ajinomoto Co., Kawasaki, Japan.*

The Association for Chemoreception Sciences Executive Committee 1981 - 1982

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Program Committee 1981 - 1982

Robert M. Bradley, William S. Cain (Chair), Janneane F. Gent, David Hornung, Foteos Macrides, and **John Teeter.**

The Association gratefully acknowledges the generous financial support provided by its corporate members:

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The Association also acknowledges the generous contributions of the following companies for special events on the AChemS IV program:

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