

Gordon research conference program

Chemical Senses

August 18–23

Salve Regina University

Newport, RI, USA

Barry W Ache, Chair and Alan C Spector, Vice Chair

Understanding coding of odor and tastes through an understanding of drug receptors

Chair: G Shepherd, Yale University, USA

K Strader, Schering–Plough Research Institute, USA:
Structural basis for G-protein-coupled receptor function

How shall we measure stimulus quality in the chemical senses?

Chair: C Derby, Georgia State University, USA

W Cain, University of California at San Diego, USA:
Development of a metric for perceived odor quality

P Breslin, Monell Center, USA: Discrimination studies as a tool for identifying qualitative differences in taste stimuli

J Glendinning, University of Arizona, USA: Comparative and ecological perspectives on taste quality

Discussant: A Gilbert, Synesthetics, Inc., USA

Role of peripheral integration in coding chemosensory stimuli

Chair: J VanHouten, University of Vermont, USA

B Lindemann, University of Saarlandes, Germany: Sweet and salty: transduction in taste (tentative)

H Breer, University of Hohenheim-Stuttgart, Germany: Odor specificity of signal recognition and transduction in olfactory neurons (tentative)

Discussants: L Kalinoski, Monell Center, USA and S Roper, University of Miami, USA

Genomic organization and receptor expression in chemoreceptor cells

Chair: R Reed, Johns Hopkins University, USA

F Margolis, University of Maryland, USA: Control of expression of olfactory marker protein in olfactory receptor neurons (tentative)

C Bargmann, University of California at San Francisco, USA:
Olfactory receptors and specificity in *C. elegans*

D Lancet, Weizmann Institute, Israel: Human olfactory receptor clusters: genome analysis of diversity and evolution

Discussant: N Chaudhari, University of Miami, USA

Oscillatory potentials: their role in odor quality discrimination

Chair: A Gelperin, AT&T, USA

G Laurant, California Institute of Technology, USA:
Temporal and dynamic representations of odors in an insect's olfactory brain

K Delaney, Simon Fraser University, Canada:
Odor-elicited oscillations in frog olfactory bulb and cortex: from single cells to widespread coherence

Discussants: J Kauer, Tufts University, USA and J Caprio, Louisiana State University, USA

Imaging as a key to understanding cortical representation of stimulus quality

Chair: G Kobal, University of Erlangen-Nurnberg, Germany

J Gore, Yale University, USA: Applications of magnetic resonance imaging to the study of the human brain: state of the art

B Kettenmann, University of Erlangen-Nurnberg, Germany:
Localization of cortical olfactory areas with magnetic source imaging and functional magnetic resonance imaging

J Hirsch, Sloan–Kettering Center, USA: Localization of cortical taste areas with functional magnetic resonance imaging

Discussant: R Doty, University of Pennsylvania, USA

Neural representation of the affective (hedonic) dimension of chemical stimuli

Chair: B Slotnick, American University, USA

T Yamamoto, Osaka University, Japan: Neural processing of hedonics and quality of taste stimuli in the rat brain

P Shizgal, Concordia University, Canada: **What is it, and what is it worth?: processing of quality and value in the chemical senses**

Discussants: R Norgren, Pennsylvania State University and I Bernstein, University of Washington, USA

Relating molecular, physiological and psychophysical studies to quality recognition in olfaction

Chair: T Getchell, University of Kentucky, USA

L Buck, Harvard University, USA: **Patterns of odorant-receptor input in the olfactory bulb**

K Mori, Riken Institute, Japan: **Axonal connection to and response specificity in olfactory glomeruli**

D Laing, University of Western Sydney, Australia: **The capacity of humans to process information from complex odor mixtures**

Discussant: M Shipley, University of Maryland, USA

Relating molecular, physiological and psychophysical studies to quality recognition in taste

Chair: M Frank, University of Connecticut, USA

R Margolskee, Mount Sinai, USA: **Gustducin's role in taste transduction: molecular, behavioral and electrophysiological analysis of gustducin knock-out mice**

J DeSimone, Virginia Commonwealth University, USA: **Two salt taste transducers: what types of information do they convey?**

D Smith, University of Maryland, USA: **The contribution of behavioral data to the interpretation of physiological and molecular studies of taste**

Discussant: S Kinnamon, Colorado State University, USA

Plan now to attend. Look for application materials and guidelines in the February issue of *Science* featuring the 1996 Summer Gordon Conferences. We anticipate support for minority scientists under-represented in the chemical senses and for students to attend the conference. Be sure to note on your application or in a separate communication to either of the Chairpersons if you would like to be considered for either type of support. For further information, contact:

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