

An Introduction to this Special Issue: Neuroimaging in the Chemical Senses

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This special issue of *Chemosensory Perception* is devoted to neuroimaging investigations of the chemical senses. While there were early efforts by Lord Adrian and R.W. Moncrieff to image chemosensory responses in the brain, and later investigations by others using EEG, the modern era of chemosensory neuroimaging really began in 1992 with the publication of “Functional localization and lateralization of human olfactory cortex” by Zatorre, Jones-Gotman, Evans, and Meyer in the journal *Nature*. In that study, long-handled cotton swamps saturated with odorant were waved in front of the nose and, to use the vernacular of the day, the piriform cortex “lit up.” Since that landmark study, some 20 years ago, the field has expanded dramatically. PET has largely been replaced with functional magnetic resonance imaging and advanced electro- and magneto-encephalographic techniques. Cotton wands have been replaced with fMRI compatible olfactometers equipped to measure sniffs, temperature, and humidity. Collectively, these techniques are providing unprec-

edented information about the location, timing, and interaction of brain networks that underlie our chemosensations.

This special issue contains a collection of new findings, reviews, and theoretical expositions that highlight these advances. However, we begin with a retrospective from two of the authors who ushered in this new era. Marilyn Jones-Gotman and Robert Zatorre provide an engaging account of how their interests in the chemical senses developed and ultimately how the 1992 *Nature* paper came to be. Fourteen invited papers from 42 authors then follow the retrospective.

We wish to offer our sincere gratitude to the authors for their excellent papers, their patience, and their help in compiling this special issue. We also wish to thank the editor of *Chemosensory Perception* Jeanine Delwiche and the editorial board for their confidence and enthusiasm in this project.

Sincerely,
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