

Date:

November 14, 2006

Time: 3:30 p.m.

Location:

TARO 307

Brock University

Parking in Lot A (\$5)

EVERYONE WELCOME

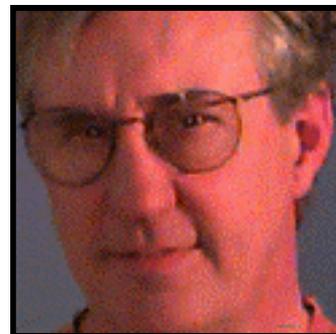
FREE ADMISSION

For further info. call:

905-688-5550, ext. 4652 or

e-mail: ccovi@brocku.ca

WINE AND THE MIND



Guest Speaker:

Terry Acree, Ph.D.

Professor of Biochemistry

Department of Food Science & Technology - Geneva, NY

During the last 10 years there have been amazing advances in the neurobiology of chemical stimulation and the psychology of flavor perception. In this seminar I will discuss the neurobiology of taste and smell, the multi-sensory perception of flavor and the viticultural and enological processes that modulate flavor chemicals in wine.

The goal of flavor research is to give grape growers and wine makers tools to help them create the wines that intensifies their customers joy. Flavor is the key.

Terry Acree's laboratory is interested in how stimulant composition is represented in perception. A seemingly infinite number of perceptions are invoked by less than 1000 odorants found in the human sensory environment. Mediated by sensory neurons expressing a given receptor these odorants generate neural excitation in the brain that is a topographic map of sensory information. Recent literature suggests that olfactory receptor expression is highly variant in the human population and that this may explain the functional variation in taste and olfaction that has been observed for decades. Understanding the relationship between stimulant composition and perception is therefore central to understanding the representation of chemical information in the brain and the impact of genetic diversity on the perception of food.

An internal representation of the external world is created in the brain of all eukaryotes by a mechanism that detects chemicals in the environment and transmit this information to the brain, where it is processed to create, at least in humans, perceptions. This sensory representation of the external chemical world in the brain is a translation of stimulus features into a neural sensory map. It is the nature of this sensory map: how it is established by stimulant patterns, how it varies in a population, and ultimately how it modulates other brain functions, e.g. emotions (joy) or behavior (buying wine), that is the goal of Dr. Acree's research. Over the years Terry and his students have developed a selective and sensitive bio-assay for smell based on gas chromatography - olfactometry (GCO) called CharmAnalysis that, along with other forms of chromatography, spectrometry, and sensory analysis, are used to study food quality.

Terry Acree received his B.A. in 1963 from the University of California-Berkeley (Biochemistry); M.S. in 1966 from Cornell University (Biochemistry); and, Ph.D. in 1968 from Cornell University (Biochemistry/Physical Organic Chemistry). He has been with the Department of Food Science and Technology, Cornell University, New York Agricultural Experiment Station, Geneva, New York since 1968. **Fields of Specialization:** Flavor Chemistry; Natural product Chemistry; Chemistry of Taste & Smell.

For a complete CV visit: www.nysaes.cornell.edu/fst/faculty/acree/s.acree.html