Abstracts

Aroma, Touch and Well-Being
June 5th, 2003
Sponsored by Colgate-Palmolive Company maker of

Symposium abstracts

Diana K. Grina
Global Director, Professional Relations, Personal Care, Colgate-Palmolive, Co.

Dr. Claire Q. He
Senior Research Scientist, Advanced Technology Skin Care, Personal Care, Colgate-Palmolive, Co.

Dr. Anthony Rawlings
Chief Editor of IJCS

Dear Readers

Sensorially exciting personal care products and regimens appear in the cosmetic arena more and more. The growing consumer delight in this area has sparked a whole new area of research over the last several years to investigate the relationship between aromas, touch, emotion, and general well-being. This symposium sponsored by Colgate-Palmolive brought together research leaders in the area and explored some of the latest findings on how specific sensory stimuli may enhance quality of life and the feeling of personal well-being. Colgate-Palmolive's leadership in personal care is reflected in the creation of this symposia, the panel of experts chosen, and the topics presented.

The International Journal of Cosmetic Science thanks the Colgate-Palmolive Company for its support of leading-edge scientific exchange in personal care and for publishing these abstracts.

Aroma, touch and well-being: following the mind to wellness

J. C. Brahms
Colgate-Palmolive, Co., Piscataway, NJ 08855-1343, USA

Fragrances have been used since ancient times to deliver a variety of benefits. The term aromatherapy was first coined in the 1920s by a French chemist named Rene-Maurice Gattefossé, referring specifically to the use of natural fragrance essential oils to treat injury and disease. More recently, the discovery that touch is an important part of healthy human development has led to a greater understanding of its role as an essential part of maintaining wellness. With the growing mainstream acceptance of holistic health care, herbal remedies and nutraceuticals, aromatherapy has become much more broadly defined to include benefits which are strictly cosmetic in nature. Today, a variety of products ranging from candles to dish-washing liquids are marketed with 'aromatherapy' benefits. Although there is no legal definition of aromatherapy in the U.S.A., specific claims can affect whether a product is considered a cosmetic or a pharmaceutical. Outside of the U.S.A., the term aromatherapy itself has very specific connotations which can affect the regulatory status of potential product introductions. In recent years, a number of new tools such as psychophysical measures and brain imaging techniques have greatly enhanced our knowledge of how touch and aromas are interpreted by the mind and body. This symposium will review the current state of our understanding in this area with the objective of providing a clearer understanding of the sometimes subtle differences of the role of fragrance and touch in maintaining well-being and enhancing personal attractiveness vs. those which are pharmacological in nature.

Cognitive, emotional and psychosocial factors in fragrance experience

P. Dalton
Monell Chemical Senses Center, Philadelphia, PA 19104, USA

Although the intensity and quality of fragrance perception is elicited by the physical

mixture of volatile chemicals available to stimulate the olfactory system, the subjective experience and response an individual exhibits is often the product of those sensory or physiological signals and higher level psychological processes involved in perception, memory and judgment. For example, the frequency and duration of exposure to a fragrance can determine whether the subsequent perception is diminished (adaptation) or enhanced (sensitization), but an individual's memories of prior associations, the situational context or expectations, and their current emotional state are potent modifiers of the intensity and quality of the final chemosensory experience. Similarly, the context in which an irritant sensation is experienced (e.g., the product or situation) may determine whether it is perceived as an adverse or pleasurable sensation. Results from numerous laboratory studies have shown that these factors play a key role in the evaluation of odor and irritant sensations arising from the perception of fragrances. Importantly, cognitive and psychosocial factors appear to have significance for understanding reactions to fragrances in a variety of use situations, from consumer products to indoor environments.

Using fragrance as a stress-relief agent

S. Warrenburg
International Flavors & Fragrance Inc., New York, NY 10019, USA

One of the most important claims within aromatherapy is that certain aromas are *stress-relief agents*. In the early 1990s, we developed a self-report instrument, called Mood-Mapping™, that taps consumers' emotional responses to fragranced products. Based on our experience with extensive testing, we predicted that the most *relaxing* fragrances would also be *stress-relieving*. In order to determine whether this was true in a consumer in-home setting, we compared a variety of fragranced bubble bath samples with matched unfragranced control samples in a home-use test. We employed self-report measures of stress, relaxation, and other moods before and after each subject took a bath. We found that baths taken with a fragranced sample were significantly more stress-relieving and relaxing than those using an unfragranced control. Furthermore, specific odor qualities of the fragrances were more stress-relieving than others. We next examined whether these specific types of relaxing fragrances were stress-relieving as measured physiologically. We utilized a standard laboratory stressor, the Stroop test, in a series of studies of various relaxing fragrances. We obtained the electromyogram (EMG) from the Trapezius muscle (back of the shoulder) as well as other physiological measures during these experiments. Trapezius EMG levels reliably increase during the Stroop test. We have found that a special type of relaxing Myo-relax® fragrances (patent pending) have a muscle relaxing effect, namely, they will significantly reduce the Trapezius EMG response during the Stroop test as compared to an unfragranced control. One of these, Relaxscent from Colgate's Project Dionysos, will be featured. Thus, we have shown that Mood-Mapped relaxing fragrances are demonstrably stress-relieving as measured both physiologically as well as by self-report in a consumer setting.

Physiological effects of emotional odors

T. S. Lorig
Washington & Lee University, Lexington, VA 24450, USA

Advances in neuromaging have provided new and exciting knowledge concerning how odors come to activate emotional systems in the brain. Often neglected are the concomitant changes that follow this activation throughout the body. Odor-induced emotional changes in peripheral physiological systems will be critically discussed including changes in respiration, muscle tone, skin conductance and heart rate. Multidimensional patterning of these responses may prove especially valuable in identifying subtle emotional response. Research to date, however, contains few examples of successful response patterning related to odors.

Massage and aroma therapy

T. Field
Touch Research Institute, University of Miami Medical School, Miami, Fl 33101, USA

Massage therapy has been shown to (1) facilitate growth and development; (2) reduce depression and anxiety and related stress hormones; (3) enhance sleep; (4) reduce pain; (5) reduce autoimmune disorders; and (6)

enhance immune function. These effects have been noted in samples, for example, of preterm neonates, depressed children and adults, chronic pain conditions such as fibromyalgia and migraines, autoimmune disorders including asthma and diabetes and immune disorders including HIV and Cancer. Potential underlying mechanisms are enhanced parasympathetic activity (increased vagal tone) following massage therapy, decreased stress hormone (cortisol), increased serotonin (body's natural pain killer and antidepressant) and enhanced immune function leading to increased natural killer cell activity (front line of immune system, warding off viral and cancer cells). Aromatherapy has been noted to relax babies and adults and shift their EEG patterns in the direction of a more positive mood and heightened alertness.

Scent, physical appearance and skin care

T. White
Le Moyne College, Syracuse, New York 13214, USA

The influence of the mind on the body and the body's influence on the mind have far reaching implications for human health and well-being in modern society. One of the most salient present-day examples of this interaction is the complex relationship between emotional state and skin health, which appears to be positively correlated. Because odorants have been demonstrated to improve mood and increase relaxation, Aromachology can assist in the maintenance of good skin health, and can be an important part of skin-care practices. Through both the natural qualities of odorants and through odor-induced stress-reduction, the sense of smell can enhance skin appearance and health, which leads to a sense of well-being and better quality of life.

Aromatherapy: the future

J. Morley
International Flavors & Fragrances Inc., New York, NY 10019, USA

The market development of Aromatherapy products has been heavily influenced by the twentieth century model of brand management and regulatory issues. The result has seen Aromatherapy products focus primarily on product attributes and the physical benefits of use, at the expense of exploring and developing the consumer's emotional response to the brand. Aromachology – the science of the effect of scent on mood and behavior or the 'Psychology of Scent' – represents the next stage of the advancement of Aromatherapy into the twenty-first century. A major opportunity exists to refocus products and brands on the emotional and lifestyle/environmental benefits which these products can deliver. The presentation will explore new ways of developing fragrances capable of communicating stronger, more compelling emotional benefits to consumers.