# Redolent olfaction

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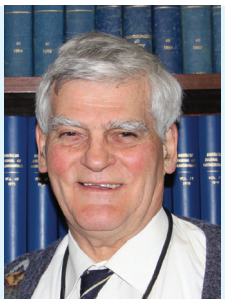

*An acquainted scent….*
*That of soft , wet mud stepped on…*
*Oh, the good old days!*

It may not be surprising that it is in Haiku that we may find the most expressive description of just how evocative are smells… the three lines above, written by Sneha RV, present as a "*smell memory*" an entire image of youthful exuberance in the enjoyment of… slush! Haiku is a traditional form of Japanese poetry which originated as the concept of "*the introductory lines of light-linked verse*". There are three lines in strict Haiku verse, the first having five syllables, the second, seven, whilst the third has again five syllables. In English, attempts at meeting the 5/7/5 syllable rule are sometimes waived to a compromise 6/7/6 as English is not as precise as Japanese. The imagery may be described as a "*Zen Snapshot*" of a scene, an everyday occurrence, or a natural phenomenon.

For generations of patients, the iconic aroma of Oil of Cloves has remained deeply ingrained in olfactory memory with the immediate identification of the proximity of a dental surgery. As you exited the lift on the fourth floor, there it was, both the recognition of the dentist and the realisation that soon it would be your turn in the chair. *Current Biology* carried in 2009 an intriguing paper in which the authors suggested that it is the first time a particular smell is encountered in conjunction with an identifiable experience that leaves a unique and durable impression... an olfactory memory... which encountered later always evokes a clear recollection of the experience.[1] The authors investigated brain activity and found that the main stimulation was of the hippocampus, a brain structure involved in memory, and the amygdala, a brain structure involved in emotion. The pattern was so profound that it was possible a week later to predict which odours would be recognised just by looking at brain activity.

Perhaps the childhood visit to the dentist that the adult recalls is invoked not by the event itself but by the impact of that distinctive odour… eugenol.

Reliance of the profession on Zinc Oxide and Oil of Cloves, our old favourite, "*ZOE*", may not be quite as extensive today as in the past, but interest in the medicinal properties of the plant extract remain pertinent. Hence it is relevant that included in this issue of the Journal is a paper delving into that very quest, seeking to enquire into the feasibility of applying eugenol in the treatment of periodontal disease. ZOE has been described by David Pashley[2] as a "wondrous and mysterious medicine."

In low concentrations Eugenol has been identified as having local anaesthetic, anti-microbial and anti-inflammatory effects. The oil is derived from *Eugenia caryophyllata*, the Clove tree found in Madagascar, Zanzibar and nearby lands. It is at least partly because of the considerable role Eugenol has played in Dentistry that the theme this year for the front cover of the Journal is Medicinal Plants of Africa. Even at this early stage of the year, it is evident that there are many botanical candidates, all relevant to the practice of dentistry, which will vie for the Front Cover picture.

Dentistry has made phenomenal progress over recent decades. That has been particularly evident in the fields of technology and treatment techniques. Markowitz and Vassilou,[3] in an Editorial published last year by *Quintessence International*, observed, on the other hand, that "*little progress has been made applying the existing vast arsenal of pharmacological tools to the treatment of reversible pulpal pathologies*". That statement could be widened to include all facets of clinical dentistry. Would it be too ambitious to consider the possibility that there are indeed "*wondrous*" medications awaiting discovery amongst our rich flora?

*And so to a Haiku to do homage to Eugenol:*

*Memories of clove*
*Open mouthed in the surgery*
*Bless'd relief from pain*

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**References**

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2. Dr. David Pashley, BS, MDD. PHd, Regents' Professor of Oral Biology, School of Dentistry, Medical College of Georgia, Augusta, USA. Visited South Africa last year at the 19th International Symposium of Dental Hygiene.
3. Markowitz, K,Vassilou E. Guest Editorial: Topical drug treatment for the dental pulp: an idea whose time has come. Quintessence International 2013. 44; 7:463-5.