

EDITORIAL**PROPOLIS – A NATURE CURE**

This editorial was prompted by a television promotion commercial of a toilet soap, "Protex", which was claimed to be superior to all other toilet soaps in the Kenyan market because it contains *propolis*. So, what is propolis? Propolis consists of resin exudates that ooze from tree bark. The bees mix the resin with wax they secrete from their abdomen. It then follows that its composition varies depending on the plant species, season, and geographical location. Its colour varies too, but it is generally dark brown. More than 19 compounds have been identified and include flavonoids such as betulene and isovanillin, several vitamins such as vitamins A, B₁, B₂, and B₃, and biotin, and minerals such as magnesium, calcium, iron, zinc, cobalt and copper. It also has some unidentified antioxidant agents.

The use of propolis can be traced back to the time of Hippocrates who used it to heal sores and ulcers. Today, it is sometimes referred to as "natural penicillin" with no known side effects. Bees use propolis which lines the entrance to the hive to sterilize themselves and keep their honey and the interior disease-free. Hippocratic medicines were based on the common believe on *Nature Cure* (*vix medicatrix naturae*) which postulates that it is the life force that cured disease. This unorthodox approach to treatment of disease is what is commonly referred to as alternative medicine. The effectiveness of alternative medicine cannot be demonstrated using scientific methods we apply to orthodox drugs. Often, the discovery of alternative medicines is based on observations on how animals behave when they are sick. Yet another approach is what came to be known as the *doctrine of signatures* in which the physical characteristics of plants such as shape, colour and smell were supposed to indicate possible medicinal value. This doctrine is based on a common belief that there exists a cure for every disease in the vicinity and the challenge is to find it. The Rauwolfian root was used to treat snake bites because of its shape. The biblical story of Eve, the serpent and the apple in the Garden of Eden is consistent with this belief. It is not a coincidence that the apple is purple and heart-shaped (signifying love). It is reasonable to assume that the Garden of Eden had other fruits such as bananas, oranges, pears and mangoes which did not attract the attention of the serpent.

The belief in *Nature Cure* was well established long before Hippocratic medicines. For example Pen Tsao (Great Herbal of China) which emphasized on nature cure appeared around 3000 BC. Similarly, one of the oldest medical books in existence, the *Ebers Papyrus*, that dates back to about 1500 BC promoted the concept of nature cure. Nature Cure appeals to our emotions rather than reasons and is often a reaction to disillusionment with orthodox medicine. In the 1950s, Dr. D.C. Jarvis, a qualified medical practitioner in the state of Vermont, United States of America, published a book, "Folk Medicine", which promoted alternative medicines. The book reached the top of the best seller list for non-fictions published by the *Time Magazine* and stayed at the *Time Top 10* for a year. For good health, Jarvis recommended two teaspoonfuls of honey and two teaspoonfuls of apple-cider vinegar taken in a glass of water once a day. Researchers often use folk medicine as a basis for discovery of medicinal substances. Today, there are many published scientific reports on the use of propolis. It is widely used as an emollient to treat burns, and as a dental antiplaque agent to protect against dental caries. During the World War II, it was used successfully by the Soviet Union to treat battle wounds. It has also been used to treat genital and vaginal lesions. Research conducted at the University of Texas, School of Medicine, showed that it is more effective in the treatment of minor burns than silver sulphadiazine (<http://www.ehow.com/how-233033>, accessed 15/03/2013). The latter is the prototype for drugs used in the treatment of burns.

Propolis is very expensive. One hundred grams (100 g) cost about \$100 in the international market. It is formulated as a 3% ointment for purpose of burn treatment and other topical lesions. The antimicrobial activity of propolis is well documented in the literature. What is clearly in doubt is the claim by practitioners of alternative medicine which seem to suggest that it is a panacea for many illnesses only comparable to the Chinese herb, *ginseng*. No serious significance should be given to the television promotion commercial. They are sales gimmicks. This notwithstanding, the rationale for use of propolis is credible.

Prof. Charles K. Maitai,
Editor-in-Chief.