

★ Harnessing the Healing Powers of Honey

by Dr Alexander Goroshit (more info)

listed in *nutraceuticals*, originally published in issue 186 - September 2011

Honey is a remarkable substance. Containing approximately 150 biologically active ingredients, its healing properties have been known to humanity for millennia. In recent years the conventional medicinal community has started to increasingly value honey for its potent antibacterial and anti-inflammatory properties - it is now being recommended to patients for the treatment of a wide range of health issues, from coughs and colds to stomach upsets and burns.



Dr Goroshit in his laboratory

Scientists have yet to fully agree the exact way honey works; however it is now believed that its healing action is due to enzymes contained within it that facilitate the release of hydrogen peroxide and gluconic acid in the body.

Over recent years there has been a great volume of research into the medicinal properties of honey, with a number of theories being developed and hundreds of papers being published on the topic in the last 12 months alone. Interestingly, many scientists have found a remarkable synergy between the results of the studies and traditional usage of honey as a healing substance.

A study published in the *International Journal of STD and AIDS* in November 2010 investigated the benefits of using honey to treat mouth lesions in AIDS victims. These sores were caused by a strain of candida fungus that had proved to be resistant to anti-fungal medications such as fluconazole. The authors of the report discovered Ethiopian multiflora honey to have a distinct antifungal activity against the resistant strains of candida, a finding that also vindicated the traditional Ethiopian practice of using honey as a treatment for mouth sores.[1]

Other research has focused on the antioxidant benefits of honey. A report carried out in 1990 found that honey helps to inhibit xanthine and xanthine oxidase. These substances play a key role in forming uric acid in the body, which in turn is a leading factor behind inflammatory conditions such as gout and arthritis. The author of the study concluded that it was the antioxidants within honey that contributed towards its anti-inflammatory abilities, meaning that it could conceivably be used as a preventative against conditions such as arthritis.[2]

In April 2011 research was presented at the Society for General Microbiology in Harrogate which indicated that medical-grade Manuka honey could be used to help combat MRSA in hospitals. The results of the research, carried out at the University of Wales Institute Cardiff, indicated that Manuka honey could hinder the attachment of bacteria to tissues, a key step in the development of serious infections. This in turn blocked the formation of biofilms - substances that can prevent bacteria from being treated by antibiotics and allow them to cause persistent infections.

Indeed, Manuka honey has been the subject of numerous studies over the past few years. It is produced by honeybees who gather nectar from the Manuka flower (sometimes called the tea tree), a plant well known for its medical properties. The active ingredients found in the Manuka flowers are then transferred to the honey produced by the bees, giving the product distinct antibacterial properties.

It is well known that honeys acquire their unique aroma and flavours from the plants on which the bees feed. However, there is now a growing interest in both the alternative and conventional medicinal spheres in the ways in which the actual healing properties of a honey are affected by the chemical composition of the food nourishing the bees.

My life's research and interest in the field of apitherapy has focused on this very aspect of honey, and I have sought to uncover the ways in which honey can be harnessed and manipulated to create supplements that can be tailored to target specific ailments and conditions.

Life before LifeMel

As a medical student in the Soviet Union, I was required to take part in a professional medical project during summer vacations. In 1969, the summer between my fourth and fifth years of study, I was sent to work in Tashkent, an area of the country experiencing outbreaks of cholera. My job was to monitor the local community and inform the authorities of any new cases of the disease.

When I plotted the morbidity rates on a map, I was surprised to discover that there were two distinct areas in which there had been no cases of cholera at all. Upon visiting these areas I learnt that they were populated by families of beekeepers, who ate a diet very much based on the beehive products they produced. After further investigation, I discovered that the bees gathered their nectar from specific plants, with known medicinal benefits, and realised that the benefits of these must be present in their honey.

LifeMel was developed specifically to support the immune system of patients suffering from chemotherapy-induced neutropenia. Often when a cancer patient is undergoing treatment their levels of both red and white blood cells become dangerously low due to the powerful drugs administered, leaving their immune systems vulnerable. Sometimes, the levels of both types of blood cells become so low that further life-saving treatment is impossible. The patient also runs the risk of falling victim to other illnesses, as they do not have sufficient immune response to fight invading pathogens. LifeMel is designed to build blood count levels and strengthen the immune system, helping cancer patients to manage the side effects of their chemotherapy and allowing them continue to receive their lifesaving treatment.

In 2006 a clinical study took place at Sieff Hospital in Tzvat, Israel to more fully understand LifeMel's effect on patients suffering from a serious form of chemotherapy-induced neutropenia. This is conventionally treated by prescribing a substance called Colony-stimulating factors (CSFs); however these drugs are both expensive and accompanied by serious side effects. Furthermore, this treatment had not proven to be effective for the people taking part in the trial.

LifeMel was administered to the patients after a course of their chemotherapy treatment. Following this, over 64% showed a decrease in anaemia and the incidence of severe neutropenia and were able to continue with their scheduled chemotherapy programme. In addition, the honey was found to improve the quality of life of patients and also lowered the incidence of potentially fatal thrombocytopenia (low platelet counts).

The authors of the study, published in the peer-reviewed *Journal of Medical Oncology* concluded: "LifeMel Honey is a very inexpensive, safe and effective method of preventing chemotherapy-induced pancytopenia".[3] Indeed, the cost of treating patients with LifeMel honey is approximately 8% of using CSFs.

Five years on, LifeMel is sold worldwide with many medical institutions and oncologists, particularly in Italy and Spain, recommending it to patients.

The Future of Healing Honey

Our research into harnessing the medicinal properties of honey has continued at Zuf Globus and over recent years we have researched and developed several new, targeted 'functional' honeys. These were all created by following the same principals as LifeMel but are designed for more common medical conditions. For example one of our honeys, GastroMel, has been formulated to provide effective relief from symptoms of IBS and digestive discomfort. Five of these products have been released in the UK market in the past six months with more planned for 2012.

I believe that the potential of honey within medicine is yet to be fully explored. I find this incredibly exciting and I look forward to more studies being carried out by the scientific community into how we can harness its healing powers.

In 1974 I started work at a kidney transplant centre, an institution with a very high patient mortality rate. Upon examination, it was found that the vast majority of patients died from secondary infections rather than the actual operation itself. This realization led me to start to develop a range of herbal formulas to help boost the immune system. However these formulas proved to be completely inedible due to their powerful ingredients. In an attempt to sweeten the medicine, I experimented by feeding the formulas to bees and giving patients the resulting honey.

I emigrated to Israel in the early 1990s, determined to devote my time to researching the healing properties of honey with the aim of developing a series of supplements with medicinal properties. After an exhaustive selection process, I received a grant from the Israeli government to set up a company that would undertake the development, manufacture and marketing of medicinal honey.

Developing LifeMel

The cholera outbreak in Tashkent demonstrated that bees feeding on plants with healing properties would produce a honey containing medicinal benefits. Furthermore, when a bee processes its food, a synergetic process takes place during the natural digestive process that intensifies the active properties of herbs and plants, giving them a higher level of effectiveness. This also increases the bioavailability of the botanicals, as these have been part digested by the bees, meaning our bodies more readily absorb them.

However, this phenomenon is somewhat limited in the natural world; bees only gather their food from flowering plants and the majority of active components in medicinal herbs are found in parts of the plant inaccessible to bees.

From this I began to formulate a theory that one could feed bees directly with active blends from therapeutic plants, inaccessible to bees in nature, in order to create a medicinal honey. This includes active substances from leaves and roots, such as ginseng, rather than just the nectar of flowers.

This strategy appeared to be relatively straightforward; however we soon discovered that bees are somewhat fussy by nature, and would not eat everything given to them. My research therefore focused around developing a precise blend of herbs with real healing properties that bees would also find appetising.

After an initial five months of research, our product was required to undergo external laboratory testing. The resulting laboratory reports were definitive; the honey was even more effective than antibiotics in killing bacteria that caused conditions such as throat infections and diarrhoea. This success allowed our work to continue and for me to eventually set up my own company, Zuf Globus.

The LifeMel honey blend is a unique product, the ninth formulation of my work in Israel and the result of over 30 years worth of research. The bees are fed with a specific blend of medicinal herbs and natural bioactive materials including Siberian ginseng, red clover, calendula and Cat's Claw. These are rich sources of essential oils, minerals, vitamins, alkaloids, organic acids and flavonoids, all which work to support and boost the immune system.

The resulting honey is completely natural and, other than retrieving the honey from the hive and placing it in jars, not treated in any way. We advise people to treat the honey as one would a supplement, taking one teaspoonful, twice a day. LifeMel is absorbed directly and quickly into the bloodstream, with the first stage of absorption taking place sublingually (under the tongue).