

# ANTIBIOTICS IN FLOWERS

Have you ever heard of honey being used for the treatment of anemia? And what about honey that can help cancer patients? At his laboratories in Kiryat Shmone.

Dr. Alexander Goroshit manufactures special types of honey for curing illness and easing patients' suffering.

Omer Levi

When Dr. Alexander Goroshit was a medical student in the Soviet Union, medical students used to take summer vacations, during which they carried out a professional medical project in the countryside. At the end of his fourth year of studies at the Faculty of Medicine, Dr. Alexander and some of the other medical students went to an area of the countryside where there had been an outbreak of cholera. The students' job was to go from house to house, checking each one for anyone suffering from cholera. If they found a patient, they would perform an initial examination and report back to the local health authorities.

During the evening hours, while his fellow students enjoyed themselves at the local pub, young Dr. Alexander sat over the forms he and his friends had filled out during the day, and analyzed their findings. One of the things he did was to mark the location of the houses where cholera had been discovered on a map. Having finished mapping out the cases of cholera in the area, he was surprised to notice that there were two defined areas where there had been no cases of cholera at all. Dr. Alexander visited these two cholera-free areas and discovered that they were both populated by families of bee keepers. This finding fascinated Dr. Alexander, and he made up his mind to research the subject at greater depth.

Once he had graduated from the Faculty of Medicine, he started work at the Faculty of Microbiology as a researcher and lecturer. Dr. Alexander enlisted the co-operation of the students he taught there, and they acted as his research assistants, as he researched and studied the topics of honey, bee-keeping and medicinal plants to great depth.

For many generations, bee keepers have known that the qualities of honey are affected in no small way by the food that nourishes the bees. Even the man on the street knows that the color and taste of honey made by bees who have fed on flowers from citrus trees will be different from those of honey made by bees who have fed on wild flowers. But what interested Dr. Alexander more than the color or taste of honey was the potential of its medicinal qualities.

During the course of his work there, Dr. Alexander came to understand the significance of a fact that most of us are aware of but to which we attach little if any importance: Bees can only nourish themselves with pollen found in flowering plants, or with pollen secreted by other parts of the plant. In most medicinal plants, however, the active components are to be found inside parts of the plant that are inaccessible to bees, such as the root of the plant, the stem or the leaf. Thus the idea was born that if one wanted to produce honey with effective medicinal qualities, one would have to feed the bees with those parts of the plant in which the relevant plant matter could be found. The trouble was that bees have refined tastes, and take some persuasion to eat this food! It took years of research and study to come up with an equation that met the bees' taste criteria, while also being suitable for the production of medicinal honey.

## A discovery in the greenhouse

In the early nineteen nineties, Dr. Alexander Goroshit made Aliya, determined to continue his research and development here in Israel, and to set up a company that would undertake the development, manufacture and marketing of medicinal honey. A short time after his arrival in the country, Dr. Alexander visited the technological greenhouses in Kiryat Shmone, and after a long selection process he was taken on at the greenhouses and was awarded initial funding by the Chief Scientist of the Ministry of Trade and Industry. Dr. Alexander was given two and a half rooms at the technological greenhouses. He used one of them to set up a small beehive, another as a laboratory and designated the tiny room his office. From these rooms, Dr. Alexander continued the



research he had begun in the Soviet Union, and with the help of a small team of lab technicians he developed and then manufactured various types of medicinal honey. In order to prove the effectiveness of the honey to the greenhouse manager and the Chief Scientist, Dr. Alexander carried out laboratory testing of two types of honey in Petri dishes (laboratory dishes used for growing bacteria, fungi and tissue cultures for the purposes of medical diagnosis and microbiological research). Bacteria relevant to the specific problems that the honey was supposed to treat was put into the Petri dishes. Dr. Alexander took these dishes and added a drop of medicinal honey, a drop of regular

checked the diameter around each drop, within which the bacteria had been destroyed. What became apparent was that the medicinal honey was at least as effective as the antibiotic, and sometimes even more so. The greenhouse manager and the Head Scientist were convinced.

## Also for AIDS sufferers

Over the years, Dr. Alexander has developed many different types of medicinal honey. One of them is a honey named "Dermomel", developed to reduce the suffering that pressure sores can cause among the elderly. New immigrants from the Soviet Union living in old age homes were treated with this

honey, and the results were excellent. A different honey was developed to help one of the members of staff working with Dr. Alexander in the technological greenhouse. She suffered from acute anemia caused by menstruation. Today, this honey is called "Life Miel" and is used chiefly to treat cancer patients who find that chemotherapy or radiation treatments have lowered their white blood cell count, their red blood cell count and the levels of hemoglobin in their blood. These factors are detrimental to their general state of well being and to the quality of their lives.

As his work at the greenhouse drew to a close (the Chief Scientist permits companies to use the technological greenhouses for between two and three years), Dr. Alexander and his company left and started functioning independently. Dr. Alexander found people to invest in the company, and the company "Zuf Globus Laboratories Ltd" was born. It is located in Kiryat Shmone's Northern Industrial Zone and continues to develop and manufacture many different types of medicinal honey. The company's products are marketed in Israel, Britain, the US, Canada and Mexico. In the future, the company intends to expand its activities to other countries all over the world.

Dr. Alexander doesn't rest for a moment, and has only recently developed a special honey for women suffering from symptoms of the menopause. This honey is soon to undergo a clinical trial at Sheba Hospital in Tel Hashomer. Another type of honey developed very recently is intended for the treatment of AIDS sufferers, and is soon to undergo a clinical trial at Rambam Hospital in Haifa.

Apparently, bees have refined tastes.