Shanghai’s Shengzhai Garden Cultivates Aloe Vera

In 1993, the authorities of Shengzhai Garden, working together with the Botany Department of Shanghai Agricultural College, introduced the American large-leafed aloe vera into the garden. Since then, the planting area for the species has been increased to 3 mu, with an annual production of 10 tons of fresh leaves in the first year.

The use of aloe vera as a drug in China was recorded as early as 2000 years ago, when it was listed in ancient pharmacopoeias. The plant has been used widely both medicinally and as a beauty product. Its medical potential lies in the treatment of jaundice, burns, ulcers, tonsillitis, and gastric and gynecological diseases. Aloe vera has also been used as a tonic, an astringent, and a pain killer. It can stop hemorrhage, treat diarrhea, and aid in detumescence. It is also commonly used as the main ingredient in cosmetics by many manufacturers. In fact, cosmetics containing aloe vera now account for over 80% of cosmetic products on the market in Europe, America and Japan.

Organic Acid from Usnea Effective Against Toxoplasma Parasite

Toxoplasmosis is a parasitic disease in humans caused by the parasite Toxoplasma sp. This parasite is commonly found in warm-blooded animals such as mice, pigs, dogs, and cats. While the parasite causes only a mild illness in healthy children, in most cases manifested by fever, headaches, muscle aches and swollen lymph glands, in unborn children this disease can be potentially fatal. Infected, unborn babies may suffer from mental retardation, blindness and death. Also, people who have suffered from toxoplasmosis in the past, and who then develop problems with their immune system (such as AIDS) may die from severe infections of the brain. The tachyzoite stage of the parasite can also cause miscarriage, fetal deformity, infantile hydrocephaly, psychogenetic diseases, and diseases in some organs of the body.

The conventional treatment for toxoplasmosis is with antibiotics. However, Professor Ding Dongning from the Department of Pharmacology at Xi’an Medical University has isolated an organic acid, usneic acid, from Usnea (Usnea longissima seu diffracta). Usneic acid was found to be effective in killing the tachyzoite stage of the parasite. Usnea, a parasitic lichen growing on the branches of trees, has been known to possess some medical properties. For instance, it has been used both internally and externally to prevent fungal, viral and bacterial infections. It may also be used to treat colds and flu.

After one year of experimental work, Wu Jie, a lecturer from the university’s laboratory of parasitology, showed that 50 µg of usneic acid can kill off the tachyzoite stage of Toxoplasma within four hours. The killing efficiency was 100%. This result was even better than clinical treatment using spiromycin.