

Chinese Discovery Saves Millions of Lives



The disease malaria has dogged mankind throughout history, and it could not be controlled until the invention of the quinine type of drugs.

In the 1860s, as the drug called chloroquine, which had been effective against malarial parasites, began to lose its effectiveness, malaria began to appear again in Southeast Asia. Every country in the world then poured a huge amount of human resources into discovering another anti-malaria drug. But these efforts were in vain, and the problem became a world-wide one. In 1964, China began to plan to seek a breakthrough from among traditional Chinese medicinal drugs.



There was no great discovery until 1981, when Chinese scientist Tu Youyou gave a speech titled, "Chemical Research into Artemisinin," at an international conference of the World Health Organization (WHO). The speech caused a sensation among all the delegates, as they recognized that this was a lifeline for malaria sufferers.



You must be wondering if this Tu Youyou was some kind of saint.

Tu Youyou (屠呦呦) graduated from the Medical College of Peking University, and worked at China Academy of Chinese Medical Sciences as a pharmacologist since then.



In 1969, just as the research, both in China and abroad, into treating malaria had reached a dead end, the 39-year-old Tu, in order to solve this dire problem, took on the job as head of a research team into this problem.

The first thing Tu did was interview veteran doctors of Chinese medicine and collect from them their experience and methods of treating malaria. She then arranged all the old records of the herbs used in traditional Chinese medicine, focusing on those used for the treatment of malaria. She and her colleagues performed various kinds of experiments on hundreds of kinds of Chinese medicinal herbs, including artemisinin. However, the results were disappointing; even those involving artemisinin, which had been universally well regarded, were less than ideal.



But later, Tu found a relevant passage in a medical treatise by Ge Hong of the Eastern Jin Dynasty (317-420): "Steep a handful of artemisinin in two liters of water. Extract the juice, and have the patient drink it. This will cure malaria." Most Chinese medicinal concoctions are to be taken after being boiled in water, but Ge Hong clearly states that the water used to steep artemisinin does not need to be boiled, and the juice is to be taken by the patient. This shows that artemisinin shuns high temperatures, which destroy its effectiveness; it needs a low temperature to work properly.



There was much wisdom in that one sentence, pointing to a brand-new direction for Tu and her research team. Finally, in 1972 an extract of artemisinin was found to be one hundred percent effective against malarial parasites!



In 2000 the WHO recognized artemisinin as a leading anti-malarial drug, and promoted it worldwide. From 2000 to 2015, the global ratio of deaths from malaria dropped by sixty percent. As the leading anti-malarial drug, artemisinin demonstrated that it had a great role to play.

Beginning at the age of 39, Tu devoted her life to artemisinin research. In 2015, at the age of 85, she received a Nobel Prize in Physiology or Medicine, which was the first time for a Chinese scientist to win a Nobel Prize.