

2015 Nobel Prize in Medicine awarded to the discovery of drug for Malaria from Chinese traditions

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Youyou Tu discovered Artemisinin, a drug that has significantly reduced the mortality rates for patients suffering from Malaria, for which she is awarded 2015 Nobel Prize in Physiology or Medicine with one half jointly to William C. Campbell and Satoshi Omura. They discovered a new drug, Avermectin, the derivatives of which have radically lowered the incidence of River Blindness and Lymphatic Filariasis, as well as showing efficacy against an expanding number of other parasitic diseases.

Diseases caused by parasites have plagued humankind for millennia and constitute a major global health problem. In particular, parasitic diseases affect the world's poorest populations and represent a huge barrier to improving human health and wellbeing. This year's Nobel Laureates have developed therapies that have revolutionized the treatment of some of the most devastating parasitic diseases.

Malaria was traditionally treated by chloroquine or quinine, but with declining success. By the late 1960s, efforts to eradicate Malaria had failed and the disease was on the rise. At that time, Youyou Tu in China turned to traditional herbal medicine to tackle the challenge of developing novel Malaria therapies. From a large-scale screen of herbal remedies in Malaria-infected animals, an extract from the plant *Artemisia annua* emerged as an interesting candidate. However, the results were inconsistent, so Tu revisited the ancient literature and discovered clues that guided her in her quest to successfully extract the active component from *Artemisia annua*.

The Nobel Prize release reads "Tu was the first to show that this component, later called Artemisinin, was highly effective against the Malaria parasite, both in infected animals and in humans. Artemisinin represents a new class of antimalarial agents that rapidly kill the Malaria parasites at an early stage of their development, which explains its unprecedented potency in the treatment of severe Malaria."

Youyou Tu was born in 1930 in China and is a Chinese citizen. She graduated from the Pharmacy Department at Beijing Medical University in 1955. From 1965-1978 she was Assistant Professor at the China Academy of Traditional Chinese

Medicine, from 1979-1984 Associate Professor and from 1985 Professor at the same Institute. From 2000, Tu has been Chief Professor at the China Academy of Traditional Chinese Medicine.