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Artemisia plants are deadly weapons against malaria

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Since 7 years, the association IFBV-BELHERB from Luxembourg has established a working relationship with African and South American universities, in close cooperation with other European research institutions. Several of these partners have run clinical trials with *Artemisia annua* tea. In all these trials a therapeutical effect of 95% or higher was confirmed by the use over 7 days of whole leaf infusion, capsules or tablets. One of the surprising effects noticed in these trials was that that the artemisinin content had very little impact on the results. This lead us to make an analysis as complete as possible of all the constituents, organic and inorganic, in a large series of *A. annua* samples from different origins. *A. annua* from Luxembourg which had shown very promising antimalarial results, excellent bactericidal properties and a strong anti-inflammatory effect contained very little artemisinin but higher concentrations of certain essential oils. The effect of water soluble polysaccharides, phytosterols and saponins has been neglected in the past because most of the A. annua extracts had been obtained with organic solvents. Several papers have shown that *A. annua* ingested as powdered leaves or in conjunction with fatty food significantly increases the artemisinin concentration in the blood. It is well documented in the literature that *A. afra* or sieberi which contain little or no artemisinin are extensively used as antimalarials. They contain at least 5 molecules of the same antimalarial efficacy as artemisinin. At Leiden it was found that the anti-HIV activity of *A. afra* is even higher than for *A. annua*. More recent research from the Al Quds University has shown that aqueous infusions of several Artemisia species strongly inhibit beta-hematin, like chloroquine did. But the most important finding in several of the clinical trials, especially in Kenya and Uganda, was that people who drink one or two cups of *A. annua* tea per week become immune against malaria. Similar strong prophylactic results have been obtained with Artavol, a mixture of herbs developed by the Ministry of Health in Uganda, mixture containing Artemisia without artemisinin. Resistance in this case is not related to the killing power of one single molecule like artemisinin but to the polytherapy of the whole plant which not only eliminates the parasites but boosts the immune system, avoiding thus infection, reinfection or recrudescence. Recent clinical trials in Senegal and RD Congo also have shown that Artemisia inusions are more efficient against Schistosomiasis manzon than Praziquantel.

Biography

Pierre Lutgen studied at the University of Louvain in Belgium and obtained diplomas in chemistry, social sciences and philosophy. He worked during 25 years for the Dupont Cy, in research, and during 8 years in the steel industry, mainly in the environmental field. Since his retirement he worked as consultant for health and environment as invited professor at the University in Medellin and for the European Communities in several countries. Over the last ten years he has organized the association IFBV-BELHERB studying and fighting tropical diseases with some 30 academic and medical partners in Africa, South America and Europe. Numerous peer reviewed papers have been published by this team, mainly on herbal medicine.

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