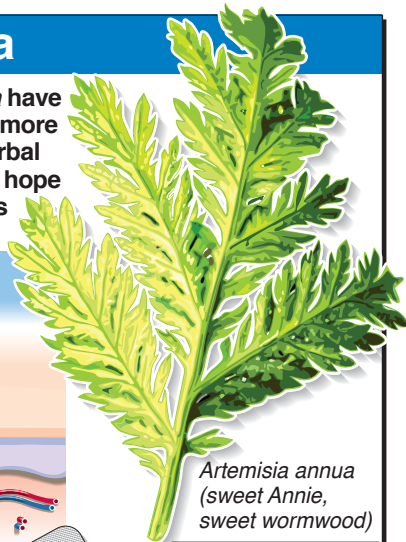
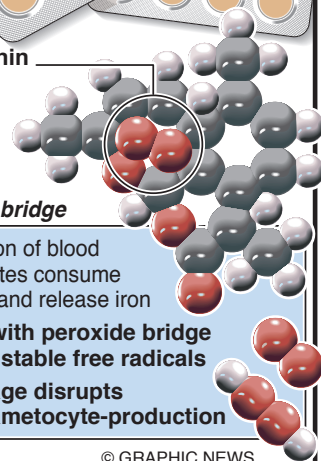


# Herbal cure for malaria

Leaves from the Chinese herb *Artemisia annua* have been used to treat mosquito-borne malaria for more than 1,500 years. Now, drugs based on its herbal extract *artemisinin*, or *qinghaosu*, are the main hope in the battle against the disease which kills one person worldwide every 30 seconds



*Artemisia annua*  
(sweet Annie,  
sweet wormwood)



## Artemisinin

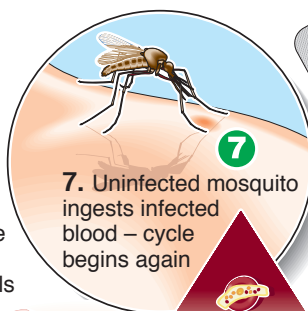
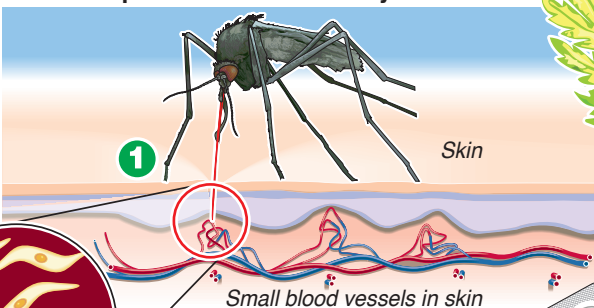
Molecule contains chemical structure called

**peroxide bridge**

During infection of blood cells, merozoites consume haemoglobin and release iron

**Iron reacts with peroxide bridge releasing unstable free radicals**

**Free-radical damage disrupts merozoite- and gametocyte-production**



6. Merozoites change into **gametocytes** – male and female *Plasmodium* reproductive cells

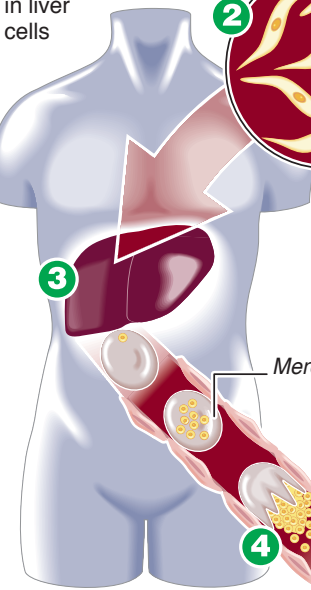
7. Uninfected mosquito ingests infected blood – cycle begins again

**Plasmodium: Malaria parasite needs both humans and mosquitoes to propagate itself**

1. **Plasmodia** spores from infected mosquito's saliva enter bloodstream

2. Spores invade liver cells

3. **Merozoites** produced in liver cells



4. Merozoites infect red blood cells, which act as incubators

5. Blood cells rupture, releasing more merozoites which infect new blood cells

