

Artemisia annua anamed (A-3):

Cultivation and uses

March 2nd, 2023

anamed artemisia programme

We invite doctors, health and development workers to use the knowledge in this document in the countries in which they live and work. We encourage communities and health centres to establish medicinal gardens, to grow *Artemisia annua anamed* and other medicinal plants and to use them to make good medicines for the effective treatment of many serious complaints and diseases.

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Further information can be found in the artemisia Starter-kit, order number 409 and the document "From Research to Experience", order number 220, and on our web-sites. **SEE ALSO: YOUTUBE ANAMED INTERNATIONAL CHANNEL**

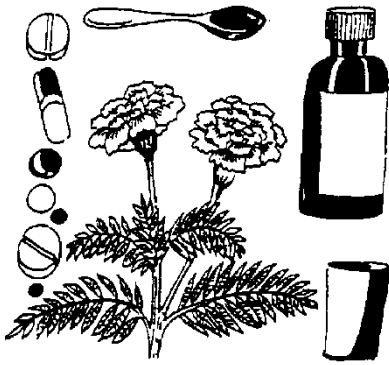
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anamed order no. 204

A: Aims and objectives of anamed



anamed

aktion natürlíche medízin

action nature et médecine

action for natural medicine

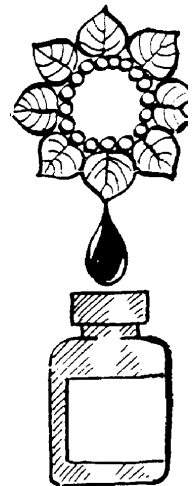
*Giving and receiving in love is the basis of a cohesive society. And each culture has its own precious locally available resources. Through dialogue, **anamed** aims to enable us all to benefit from these resources, and thus to enjoy better health for ourselves and our communities.*

A. The aims of **anamed**:

We define Natural Medicine as being the combination of the advantages of traditional herbal medicine and the so-called modern medicine. We believe that, in this way, in any given country the knowledge and skills already present in healers, doctors, nurses, botanists etc. can provide the basis of an excellent health service. Natural Medicine minimises the dependency upon imports of drugs, thus saving foreign exchange and combating poverty (a big cause of ill-health). Individual households and hospitals and clinics have a wider range of treatments available to them, and the national health budget is reduced. When civil disturbances mean that there are no modern drugs available at all, medicine based on herbs is the only alternative.

anamed aims, therefore, to;

- encourage local people to relearn their traditional skills of using herbal medicines.
- enable local people to learn how to make a bigger range of medicines that have clear expiry dates and that are given with accurate dosages.
- develop new recipes for making medicine from medicinal plants.
- encourage traditional healers, scientists and doctors to share their knowledge and experiences openly.
- encourage the growing of medicinal plants in well-managed gardens.
- combat the patenting of medicinal plants by industry.
- encourage cooperation between Christian churches and religious faiths.
- ensure the best possible health care through cooperation between practitioners of Natural Medicine, the health authorities and churches.



B. **anamed** achieves these aims by

- producing books and posters about medicinal plants.
- organising seminars in Natural Medicine in which people from a wide range of backgrounds share their knowledge and learn from each other.
- creating gardens of medicinal plants both for teaching purposes and for production.
- developing an international network of people who use *Artemisia annua* and other medicinal plants for the treatment of malaria and other diseases.

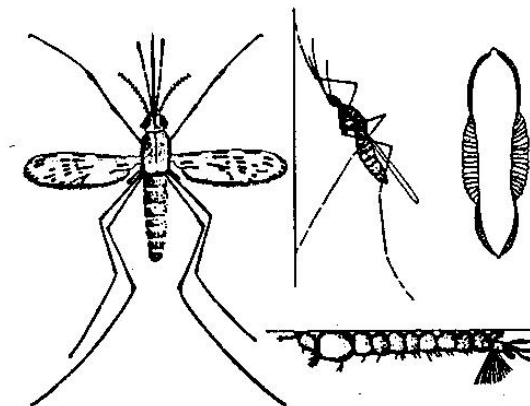
C. The objectives of **anamed** seminars are;

- to teach healers and health workers about Natural Medicine and to enable them to catch a vision of a new way of practising their professions.
- to enable doctors, nurses, healers and others to trust each other, to cooperate and to share their knowledge and experience openly.
- to spread the knowledge of Natural Medicine widely by encouraging every seminar participant to run a seminar himself or herself in their own region.
- to encourage communities to practise Natural Medicine to prevent and treat diseases.
- to demonstrate how to establish a medicinal garden.
- to learn from the Bible about a right relationship between healer and patient.

B: About Malaria

B.1. Transmission

It is only the female of only one species of mosquitoes that transmits malaria, that is the anopheles mosquito. This mosquito lives in tropical regions, multiplies on stagnant water and is particularly active during the hours of darkness. Thus, the incidence of malaria usually increases during the rainy season. When it bites a human, the mosquito penetrates a blood vessel and, at the same time as taking blood, it injects saliva which acts as an anti-coagulant to prevent the blood from clotting. If the mosquito is already infected with malaria parasites (known as plasmodium), it is via this saliva that these are injected into the bloodstream. They are transported quickly to the liver, where they multiply rapidly. After between 7 and 14 days they are released into the bloodstream again, and immediately attack red blood cells. In the bloodstream they continue to multiply asexually, and the new parasites attack more red blood cells.



B.2. Symptoms of malaria

Symptoms appear between 7 and 35 days after being bitten. The most dangerous form of malaria is that caused by *Plasmodium falciparum*. These plasmodia attack red blood cells of all ages, whereas other forms of malaria attack only young or old cells. Thus, the fever is prolonged and irregular. It may be fatal within a few days of the symptoms appearing. The infected blood cells block the blood vessels leading to vital organs, especially the kidneys. The brain may be affected, leading to delirium, confusion, coma and convulsions, a condition known as cerebral malaria. The most common symptoms of malaria include shaking, chills and fever. With all forms of malaria, a severe headache, general tiredness and vomiting may also occur. Because red blood cells are attacked, the patient may suffer anaemia, and because the bone marrow must work very hard to replace the destroyed red blood cells, the joints may ache. Malaria can hide behind a range of symptoms, e.g. diarrhoea and vomiting, cerebral problems such as convulsions or unconsciousness, anaemia or fever. When these symptoms appear, therefore, one should always be alert to the possibility of it being a symptom of malaria.

B.3. How to prevent malaria

1. Reduce the number of mosquitoes:
 - There must be no stagnant water of any sort. Therefore, have no open water in barrels or tanks - they all need lids or a mosquito grid.
 - There must be no waste lying around - e.g. old tyres and tins that collect rainwater are perfect breeding places for mosquitoes.
 - Have no high grass around the house.
 - Protect natural forest. Where there is a balanced ecology there are also mosquito predators.
2. Reduce the contact between mosquitoes and people. Mosquitoes are most active when it is dark.
 - Sleep in buildings with mosquito grids on the windows, or sleep under a mosquito net.
 - In the evenings wear long sleeves and trousers. Mosquitoes may even bite through thin clothing such as cotton socks.
 - Have aromatic herbs in pots inside the house, e.g. *Cymbopogon citratus* (lemon grass), *Tagetes erecta*, *Tagetes minuta*, scented geranium, *Lavendula officinalis* or *Artemisia annua*. Alternatively, regularly collect leaves from aromatic plants and place them inside the house.
 - Add a trace of neem oil to the kerosene in lamps.
 - If necessary you may rub a protective oil onto the skin, e.g. eucalyptus oil.

3. Reduce the number of parasites.
 - Treat ill people promptly.
 - Prevent the parasites from becoming resistant - use a range of (also herbal) treatments. Include foods in your diet that are known to have anti-malarial properties, e.g. garlic, ginger, basil, turmeric, chillies.
4. Develop a strong immunity.
 - When you have malaria - treat it effectively.
 - Eat a good, balanced diet, which includes plenty of fruit and vegetables
 - Include plenty of garlic in your diet, particularly raw garlic.
 - Avoid smoking and excess alcohol.

B.4. Malaria prophylaxis and artemisia: Our reply to those who ask

We are often asked whether visitors to the Tropics can take artemisia tea as a prophylaxis against malaria. Please do not ask *anamed* for any sort of medical advice. This is not our business. Please consult your national tropical institute for advice on malaria prophylaxis for the countries you plan to visit. *anamed* is an organisation that provides expertise in Natural Medicine for healing work that is based in the Tropics, not for holiday makers. Please remember that, for legal reasons, doctors can only follow the guidelines of the World Health Organisation, and not tell you what they would in fact take themselves!!! We present some ideas in chapter G. If you are living in a malaria endemic region, and you develop fever, start with an anti-malaria treatment straight away. See the chapter F. If possible, have your malaria infection confirmed by a laboratory test in the nearest hospital, and then take the treatment recommended. To be well prepared, in case you do develop the symptoms of malaria when you are far from medical help, *anamed* recommends that you carry with you a full malaria treatment with *Artemisia annua* tea, and a full conventional treatment such as Fansidar, doxycycline, Malarone etc.

B.5. Official recommendations for malaria prophylaxis for European visitors to tropical countries (taken with permission from <http://www.traveldoctor.co.uk/malaria.htm>)

Commercial drug names

Proguanil 100mg tablets are supplied as **Paludrine** Tablets

Chloroquine 150mg tablets are supplied as **Nivaquine** or **Avloclor** Tablets

Mefloquine 250mg tablets are supplied as **Lariam** Tablets

Malarone is a combination of **Atovaquone** 250mg and **Proguanil** 100mg

The Different Drug Regimens (as at 2014)	
Regimen 1	Mefloquine one 250mg tablet <u>weekly</u> , OR Doxycycline one 100mg capsule <u>daily</u> , or Malarone one tablet <u>daily</u> .
Regimen 2	Chloroquine 300mg <u>weekly</u> (2x150mg tablets). PLUS Proguanil 200mg <u>daily</u> (2x100mg tablets).
Regimen 3	Chloroquine 300mg <u>weekly</u> (2x150mg tablets) OR Proguanil 200mg <u>daily</u> (2x100mg tablets).
Regimen 4	No prophylactic tablets required but anti mosquito measures such as insect repellents, mosquito nets, long sleeved clothing, etc. should be strictly observed.

Length of Prophylaxis:

Chloroquine, Proguanil and Maloprim

Start **one week** before travel, throughout your stay in an endemic area and continue for **four weeks** after return. Chloroquine is often no longer effective.

Mefloquine (Lariam)

Start **two and a half weeks** before travel, throughout your stay in an endemic area and continue for **four weeks** after return.

Doxycycline

Start **two days** before travel, throughout your stay in an endemic area and continue for **four weeks** after return.

Malarone

Start **two days** before travel, throughout your stay in an endemic area and continue for **one week** after return.

Possible side-effects:

Proguanil (Paludrine) can cause nausea and simple mouth ulcers.

Chloroquine (Nivaquine or Avloclor) can cause nausea, temporary blurred vision and rashes.

Patients with a history of psychiatric disturbances (including depression) should not take **mefloquine** as it may precipitate these conditions. It is now advised that mefloquine be started two and a half weeks before travel so that you recognise in good time whether there are any adverse psychological side-effects. (anamed: Many people refuse to take this drug altogether because of its known, sometimes very severe, side effects.)

Doxycycline does carry some risk of photosensitisation i.e. can make you prone to sunburn.

Malarone is a relatively new treatment and is virtually free of side effects. It is licensed for use in stays of up to 28 days but there is now experience of it being taken safely for up to three months.

Further information can be found on the site of the World Health Organisation (WHO).

Foto: Artemisia annua anamed garden in Assam / India



anamed: Malaria - Medicinal plants as a help for self-help!

Malaria! A problem? Be positive!

Disease provides us with the opportunity to learn more about the natural world. This requires education. We must know how we become sick, how we can treat ourselves and what else we can do to become well again – and to stay well.

Worldwide about 500 million people suffer from malaria each year, and between 1 and 3 million die. Because the plasmodia have developed resistance to conventional antimalarial drugs, the incidence of malaria has increased. It is true that very effective “ACT” (artemisinin combination therapy) drugs are now available, but because malaria is mainly a disease suffered by people who are poor, most malaria patients cannot afford them, and the incidence of malaria continues to rise

Thank God for medicinal plants that we can grow in our own gardens!

Research worldwide

anamed is not alone in promoting the use of herbal remedies for malaria. In 1999 a “Research Initiative on Traditional Antimalarial Methods”, or RITAM, was established, albeit with an absolute minimum of funding. RITAM is

- A partnership between the WHO's Tropical Disease Research (TDR) division and the Global Initiative for Traditional Systems (GIFTS) of Health at the University of Oxford.
- A global network of researchers and others who are interested in validating local herbal medicines to prevent and/or treat malaria, and local methods of insect repellence and vector control.

RITAM is an international network with over 200 members from at least 30 countries in four continents. The aims of RITAM include:

1. To establish and strengthen links between researchers interested in research on traditional antimalarial methods, in different countries and institutions.
2. To catalogue and review current knowledge on traditional antimalarial methods.

In 2004 RITAM published the book, edited by the Honorary Secretary of RITAM, Dr Merlin Willcox, with the title “*Traditional Medicines and Malaria*” with Chapter 3 “*Artemisia annua as a traditional herbal medicine*”.

In some preliminary studies, RITAM collected data from literature regarding antimalarial plants and from researchers in the field. A total of 989 different species were reported as having been used to treat malaria, and there were reports of the following being used in three continents:

Annona muricata L

Kalanchoe (=Bryophyllum) pinnata Lam

Momordica charantia L

Jatropha curcas L

Ricinus communis L

Senna (=Cassia) occidentalis (L) Link

Senna (=Cassia) tora L

Cissampelos pareira L

Zingiber officinale

27 plants were reported from 2 continents, including the following plants from the anamed chart: *Carica papaya*, *Tagetes erecta*, *Tithonia diversifolia*, *Senna* (=Cassia) *alata*, *Tamarindus indica*, *Azadirachta indica*, *Melia azedarach*, *Moringa oleifera*, *Psidium guajava* and *Curcuma longa*.

Several African countries have active research programmes into their own antimalarial plants. For example, in Ghana, the Plant Research Centre at Mampong has investigated the plant *Cryptolepis sanguinolenta* and produces and markets an anti-malarial medicine from the roots of this plant called "Nibima". In Kenya, the University of Nairobi is studying the antiplasmodial activity of *Ajuga remota*.

An anamed story

Healing plants can save many lives. A wonderful example comes from the D. R. Congo. In 1997 the Bishop of the diocese, Bokungu-Ikela, had to flee from the rebels and hide for four weeks in the forest, together with 20 members of his diocese. They had no houses, no mosquito nets and no medicines - they were simply under the trees! Whenever they had fever, they drank the teas listed in the Table "Herbal remedies for malaria" (see page 7). "In spite of our fears, not one of us became dangerously ill with malaria," the bishop told us.

Treatment with herbs – the recommendations of anamed

The following is based on information collected by *anamed* over many years and is taken from the *anamed* seminar handbook "*Natural Medicine in the Tropics: II Seminar Handbook*".

Use a range of herbs - and make it impossible for the malaria parasites to develop a resistance to the treatment.

Drink a lot. Drinking enables the body to get rid of pyrogens, which are the cause of the fever. They are passed through the skin by sweating. Lemon grass tea also cleanses the blood and body. We recommend that an adult malaria patient drinks 2 litres of lemon grass tea each day in addition to one litre of one of the other herbal teas listed in Table I. We actually recommend that an adult with a high temperature should drink two litres of lemon grass tea each day, whatever the cause.

Notes on treatments

1. Adults should always drink in total about 3 litres a day. This could be one litre of a particular treatment, e.g. neem, and 2 litres of lemon grass tea. Children less, depending on their body weight.
2. A tea can be either an infusion or a decoction. Infusions: Pour one litre of boiling water over one handful of fresh leaves, or 15g dried leaves (5g if *Artemisia annua* or *Azadirachta indica*). Leave to stand for about 15 minutes, then pour through a sieve.
3. Decoctions: Quantities as for infusions. Boil the leaves or roots in the water for 10 to 20 minutes. Cool and sieve.
4. With lemon grass, boil the leaves for two minutes, leave to stand for 15 minutes and then pour through a sieve.
5. *Cassia occidentalis*. Take 20g of the fresh herb, without fruits. Boil in one litre of water for 15 minutes, cool and filter. Drink in four portions in the course of the day. Continue this treatment for five days.
6. *Vernonia amygdalina*. The leaves are very bitter. The bark of the roots is, in fact, more effective. When using roots, use secondary roots, not the main root, so that the tree does not die. Use a handful of bark from the roots, wash and boil in water for 20 minutes.
7. *Cinchona officinalis*. Try the following recipe: boil 10g or three heaped teaspoons of pulverised bark in one litre water for 10 minutes, filter and drink in portions over 24 hours. Children take less, depending on body weight.
8. Sugar (or, even better, honey) may be added to all the teas. Malaria destroys the sugar in the body, and therefore it is helpful to replenish the sugar-level in the blood.

9. If all these plants are ineffective, continue to give 2 litres of lemon grass tea each day, and give also the chemical treatment (i.e. chloroquine or Fansidar). Verify also that it really is malaria from which the patient suffers!
10. Remember that no two patients are ever the same. Although two people may exhibit the same symptoms, they may not respond to the same herb.
11. Pregnant women must not use *Azadirachta indica* or *Vernonia amygdalina* at all. Nor should *Cinchona officinalis* be used at all during the first three months of pregnancy, and *Artemisia annua* during the first three months only in an emergency.

Women more than 3 months pregnant and children under five years old should, if possible, use *Artemisia annua* only under the supervision of a doctor.

Foto: Dr. Hans-Martin Hirt (left) and his collaborator Dr. Eisenhart von Loeper, advocate.



Malaria patients should drink two litres of lemon grass tea each day, and one litre of one of the following:



Table I: Herbal remedies for malaria

Plant name	Recommended up to a body temp. of (°C)	Part of plant	How used	Effect -iveness	Side effects
<i>Cymbopogon citratus</i> (lemon grass)	always	leaves	tea (see note 4)	+	none
<i>Allium sativum</i> (garlic)	always	cloves	three heaped tablespoons chopped garlic each day	+	+ stomach ache
<i>Zingiber officinalis</i> (ginger)	37.5	roots	eat one handful fresh, or boil for 10 minutes. Do not filter, but drink and eat everything.	+	none
<i>Psidium guajava</i> (guava)	37.5	leaves	tea (decoction)	+	none
<i>Carica papaya</i> (pawpaw)	38.0	leaves	tea (infusion)	+	+ possibility of allergies developing
<i>Cassia occidentalis</i> (coffee senna)	38.0	leaves	tea (decoction) (see note 5)	+	+ diarrhoea
<i>Azadirachta indica</i> (neem)	38.5	leaves (see note 11)	tea (infusion)	++	++ irritation of the liver
<i>Vernonia amygdalina</i> (bitter leaf)	38.5	leaves or root (see notes 6,11)	leaves: infusion roots: decoction	+	+ as yet unknown; it contains cytotoxic substances
<i>Cinchona officinalis</i> (China tree)	40.0	bark (see notes 7,11)	tea (decoction)	+++	+++ tinnitus (buzzing in the ear). Sometimes giddiness, nausea, vomiting. With high dosages, a risk of deafness, and bleeding in the inner ear.
<i>Artemisia annua</i> (sweet Annie)	40.0	leaves (see note 11)	tea (infusion)	+++	none

When can we say that any malaria treatment has been effective?

Clinical studies undertaken at the University of Tübingen in Germany with artemisia tea are summarised in our publication “*Artemisia annua*: From research to experience” (Order number 220). In his book, “Traditional Medicinal Plants and Malaria”, CRC Press London, 2004, page 48, Dr Merlin Willcox presents an overview and summary: *Artemisia annua* was given to a total of 899 patients, as tea, powder or tincture. The healing rate was between 70 and 100%, the recrudescence rate between 8 and 39%. *anamed Bukavu* (south-east Congo) treated 254 patients with artemisia tea as recommended by anamed. The healing rate was 93%, the rate of recrudescence was 13%. Further studies by Dr Müller et al (2004) showed a success of 70% and a recrudescence rate of 39%.

Because artemisinin has a half-life of a few hours only (which is considerably less than with Fansidar etc.), we believe that most of these cases are in fact new infections and not a return of the older infection. In contrast, from our partners in Africa we receive overwhelming feedback that indicates a very high rate of success with artemisia tea with fewer problems of recrudescence than with conventional drugs.

But what do we mean by “healing”? It is almost impossible to compare the clinical studies of various malaria therapies in the literature, because every scientific (!) author uses a different definition. For tourists the situation is clear: they are healed when all plasmodia are removed from the blood and all clinical symptoms like fever, vomiting, headache etc. are gone.

But how does one define healing in the case of people in the tropics, who are bitten by infected mosquitoes almost every day? In fact, they need to have a small number of plasmodia in their blood, in order to keep the immune system active. There is one possible definition: An inhabitant of the tropics is healthy if he no longer shows symptoms after two weeks of treatment OR if no plasmodia can be found in his blood.

AIDS and malaria: If malaria patients are also infected with the AIDS virus, their resistance is very low! Therefore, a recrudescence can easily occur after 2 to 4 weeks, and the patients become ill again. Let's suppose that artemisia kills 99.9% of the remaining plasmodia in the blood per day. Then the success of the treatment is better the longer the tea is taken. Any remaining plasmodia are normally destroyed by the body itself.

In a patient with very low immunity, however, the remaining plasmodia can slowly start to reproduce again. In this case we recommend that artemisia tea be given together with an additional treatment, for instance Fansidar, quinine pills etc. If the degree of the illness allows it, do this on the third day of treatment with the tea, otherwise on the first day. See also our notes on AIDS in Section H.

Another approach is to administer not “artemisinin combination therapy”, but “Artemisia Combination Therapy”! This is the combination of artemisia tea with another herbal remedy, e.g. tea of the cinchona bark, neem leaves or other plants effective in treating malaria - here we would be thankful for your feedback.



C: A-3: Cultivation and harvest

Family: Asteraceae. *Artemisia annua anamed* (A-3) is a special breed of *Artemisia annua* which, compared with wild forms, has many advantages;

- it grows higher, up to 3 metres,
- it has many more leaves,
- it flowers much later,
- it has a higher content of medicinally useful compounds and,
- most importantly, it will grow in the tropics.

1. SOWING THE SEEDS.

Keep the seeds dry and they will keep well. Each year the proportion of the seeds that germinate reduces by only 10%, provided you keep them in the “dry box” with silica gel.

A suggestion: Every six months sow 1/3 of the seeds. You will notice that the seeds and the seedlings are very small and sensitive. It makes no sense to take part in the anamed artemisia programme unless you yourself have enough time. We have heard too many stories of gardeners who have taken the weekend off, leaving the seedlings unattended, which have then all died.

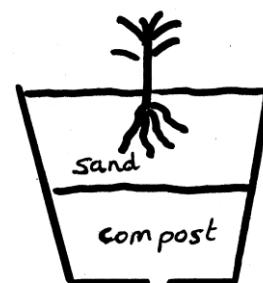
Whichever of the methods below that you follow, you should distribute the seeds evenly over the surface of the seedbed - a kitchen sieve may be helpful. Do not cover the seeds; they need light to germinate. The seedbed should be placed in direct sunlight, either inside on a windowsill, or outside on the veranda to protect it from the rain. The seedbed should always stand in a larger tray which contains a little (half a centimetre) water.

In the European winter place your seedbed in the lightest place possible. At night you may need to provide extra light using say a 25 watt light bulb. Place the bulb as close as possible to the surface of the bed so that it also lends warmth to the seeds. If the seeds receive insufficient light, the stems may become long and straggly which subsequently bend over and break. The first leaves should form very close to the surface of the earth.

Method A: Prepare the earth by mixing 1 part of old compost or really black earth with 1 part of sand. Add 2 parts of water and boil the mixture for at least 5 minutes to kill all the weed seeds. Construct a portable seed tray, e.g. from a flat wooden board of about 50cm x 50cm with a 5cm high rim, or simply use the plastic lid of a bucket. Never forget to make enough holes in the bottom of your seed tray, so that you never have standing water, and so that the seeds can be kept moist from underneath by placing it in a larger tray, or another bucket lid. Fill the seed-tray 5 cm deep with your prepared earth. If the air is very dry you may cover the seed tray with a clear plastic bag in which you have made some holes.

Method B: Take a ceramic or plastic plant pot, a transparent plastic cup with holes made in the bottom or a pot made from banana leaves. Fill the lower half with well-rotted compost, and the upper half with fine (sieved) sand. This sand must be free of weed seeds, so either collect it from the river or boil it in water.

Sow the artemisia seeds on the surface of the sand. By placing the pots in a tray that always contains a little water, the nutrients are taken upwards by the water, but any weed seeds in the compost remain underneath and cannot germinate.



Method C: If you purchase an “Artemisia Starter kit” in Europe and take it yourself to a tropical country, you will most probably fly. Drinks are often served in clear plastic beakers which are thrown away after use. If so, ask the steward(ess) to collect all the used beakers for you. Upon arrival, wash them, place a “Jiffy disc”, face up, in each one and pour in some water. The disc will expand - and in an instant you have many seedbeds!

Scatter a few seeds on each disc. Once a day add water to the pots so that there is always about ½ centimetre of water in the bottom. These discs are made of peat or coconut fibre – an ideal medium for germination – and are available in all garden centres.

2. GERMINATION.

The ideal temperature for germination is between 20 and 30°C, but artemisia seeds have germinated successfully at temperatures as low as 10°C and as high as 40°C. At 30°C the seeds germinate within 3 days, at 25°C within 5 days and at 20°C within 7 days.

If there is any danger from birds, mice or hens, cover the seedbed with a mosquito net.

The first green leaves appear after 3 to 7 days. *Artemisia annua* is a dicotyledon, that means that when it germinates, two leaves appear. It can thus be distinguished from grass seedlings that produce only one leaf.

Seedlings which grow too close together can be thinned out using tweezers and replanted elsewhere on the seed-tray.

3. PROPAGATE BY TAKING CUTTINGS!



Because *Artemisia annua anamed* is a special breed, we recommend that you always use original seeds. If no original seeds are available, it is advisable to propagate your plants by taking cuttings.

Take cuttings from the healthiest plants. Choose plants are growing strongly, that are bushy and have most leaves; ideally when they are between 2 and 4 months old. To ensure that you always have plants, take cuttings at monthly intervals, so that you always have plants of different ages. Never take cuttings from plants that have flowers, or even buds, otherwise your cuttings will also immediately start to flower!

From the plants that develop you can also take further cuttings, and then later from the new plants again - you can take cuttings in this way year after year, without any loss in artemisinin content. Cuttings grow into a clone of the parent plant!

Cut a branch of a healthy plant that is not flowering into several pieces, each 2 or 3 cm long, ideally with a razor blade. Remove all the big leaves

from these cuttings. Each cutting must have at least two nodes. The lower cut must be just below a node – otherwise the stem may rot. Remove all leaves from the lower node, and from the upper node remove only the large leaf, and leave the small side shoot intact.

Method A: Stretch a piece of coarse sacking or place a metal grid over a tray filled with water. Place your cuttings so that the lower node is in the water. The water should contain some nutrients. These may occur naturally in rain or river water. If the water is very clean, you may add a little synthetic fertiliser. A good natural liquid fertiliser can be prepared by adding water to goat droppings and allowing it to stand for about 6 weeks. Place the tray in a bright place, perhaps with some direct sunlight. If the water begins to smell badly, it must be changed. Roots develop after 2 to 4 weeks.

Method B: Prepare a seedbed as described under “Sowing the Seeds”, Methods A and B, above. Plant your cuttings one centimetre deep in your seed tray so that the roots can grow from the lower node, and so that the stem is at an angle of about 30° to the vertical. This encourages root growth. Only if the air is very dry, cover the cuttings with plastic in which you have made some holes, otherwise leave them open. Put the seedbed in a bright place, and then once they have rooted, put them in direct sunlight. It is always good to have two different beds which you treat slightly differently so that you learn the ideal conditions in your area.

Method C: Ground layering: An alternative approach, when the plant is at least 50cm high, is to bend the lower outside branches over and to bury the middle of them with soil. If necessary, cut the branch halfway through with a clean, sharp knife. A stone may be needed to keep the branch in place. As soon as the buried portion of the branch has produced some roots, cut it from the mother-plant and plant it in the field. As always, use the healthiest plants, and only plants that have no flowers or even buds.

4. PLANTING THE SEEDLINGS OUT.

Once the seedlings, whether from seeds or cuttings, are about 3 cm high (about 3 weeks after sowing), transplant them into pots that contain a mixture of sand and well-rotted compost. Continue to keep the soil moist.

When the plants are 15cm high, about 8 weeks after sowing, prepare your field.

Artemisia grows well in different types of climates and soils. It grows best in neutral or slightly alkaline soil but will tolerate slightly acid soils. The ideal crop to grow before artemisia is potatoes or sweet potatoes, because potatoes are particularly good at aerating and loosening the soil. It likes ground that is rich in nitrogen, so prepare and use plenty compost.

If the ground is very hard with a lot of clay, it is essential to dig a very large hole. We recommend 50 cm x 50 cm x 50 cm. Fill the hole with 50% sticks and leaves (ideally include some neem leaves as fertiliser and natural pesticide, but no leaves from acidic plants such as conifers or eucalyptus), 10% well-rotted manure that contains cow dung or chicken dung and 40% the original topsoil.

Use plenty mulch around your plants – to conserve moisture and to add humus.

If you plant the artemisia seedlings 60cm apart, you can have 30,000 plants to the hectare. If space permits, however, plant at intervals of at least 1 metre. In between the artemisia plants you may grow beans or groundnuts, which fertilise the soil, and after their harvest there is room for the artemisia to broaden out. Or you may alternate rows of artemisia with rows of pawpaw, maize or sorghum. A mixed culture always reduces the risk of pests and diseases. In fertile ground, the artemisia plants may grow to be 1 metre wide and 3 metres high!

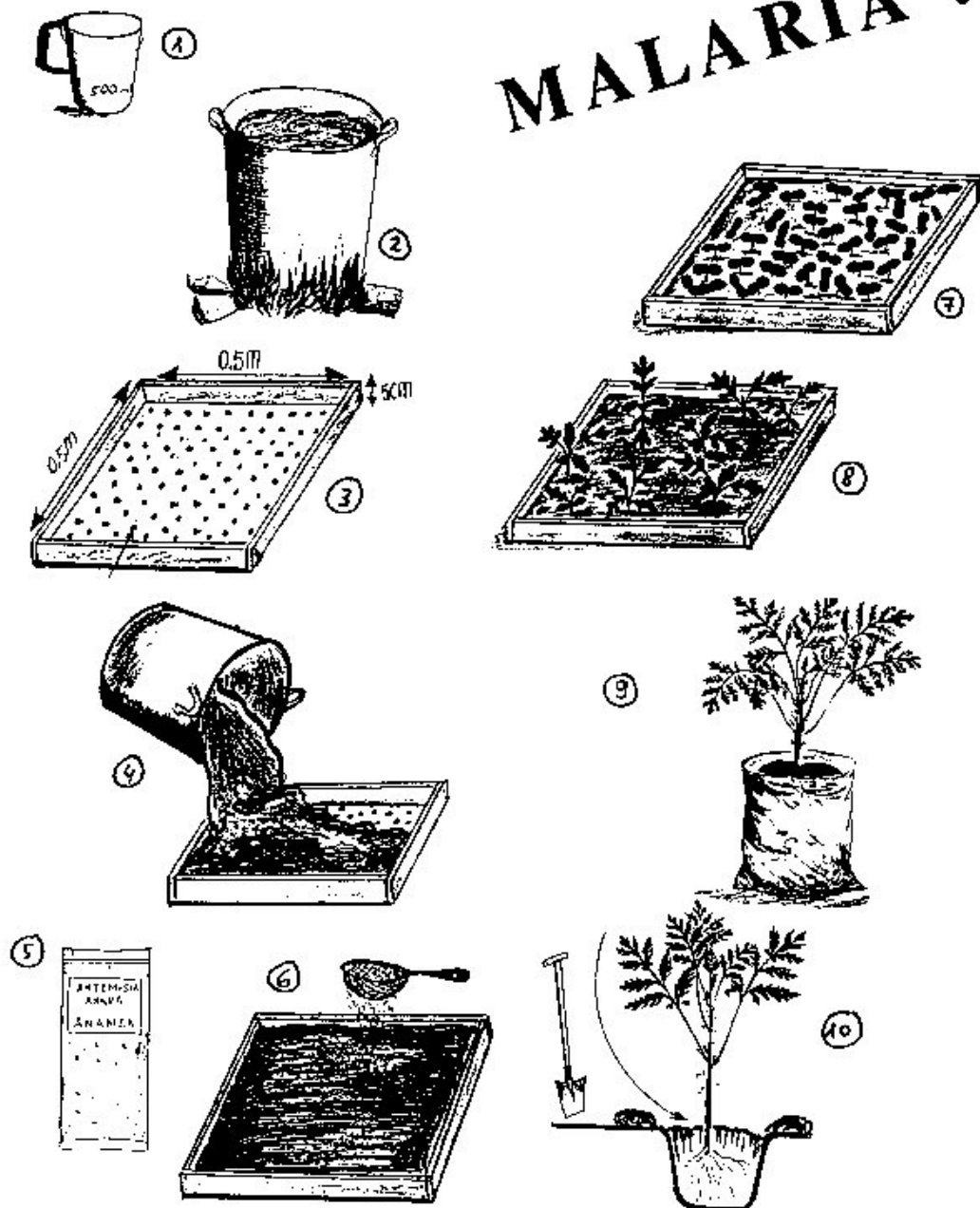
Like maize, artemisia takes a lot of nutrients out of the soil, and it is therefore unwise to grow a monoculture of artemisia repeatedly in the same place. The fertility of the soil can be maintained as follows. Plant artemisia alternately with *Tephrosia vogeleii*, with a spacing of 50cm between each plant. After about 6–8 months, harvest the artemisia. When the tephrosia is one or two years old, dig it all into the soil, and either plant another crop or, once again, plant a mixture of artemisia and tephrosia.

Plant the artemisia in a variety of locations, in the sun, in the shade, on a hillside, on the level etc. so that you discover for yourself the most ideal site. In our experience, when the temperature is below 30°C, artemisia prefers to be in the sun, but when the temperature exceeds 30°C, it prefers the shade.

In very hot and dry conditions, even over 40°C, there are several possibilities:

- a) The best: Grow artemisia in a swamp! Rake the earth a series of mounds and ditches, and plant on the mound tops.
- b) Water the plants continually.
- c) Put mulch on the ground to build up humus, to keep the earth cool and to prevent loss of water by evaporation.
- d) If you lack water, create some shade, for example by building a frame out of bamboo, on which you can grow such nutritious plants as runner beans, kiwis, passion flowers and pumpkins, or by alternating rows of A-3 with rows of pawpaw or maize.
- e) On a small-scale, when there is an extreme shortage of water. Plant in a 20 litre bucket, with holes punctured in the bottom and filled with very good earth. The bucket must always stand in 2 to 3 cm of water. Experiment by standing the buckets in a variety of locations.

MALARIA ?



1. Mix 10 cups each of soil, sand and water.
2. Boil this mixture for 5 minutes to destroy the weed seeds.
3. Make a portable seedbed out of wood and put small holes in the base.
4. Put the soil into the seedbed.
5. Open the bag of seeds – note how very small they are.
6. Spread the seeds evenly. Do not cover them. Put the seedbed in a bright place.
Before the earth becomes dry, place the seedbed in water.
7. The seeds germinate in 3 to 7 days. They need plenty sun.
8. Thin the plants out.
9. One to three weeks after sowing, give each plant its own paper or plastic pot.
10. When the plant is 10cm high, plant it out in the garden or field – prepare a hole about 50cm x 50 cm x 50 cm. Apply mulch generously.

ARTEMISIA ANNUA ANAMED!



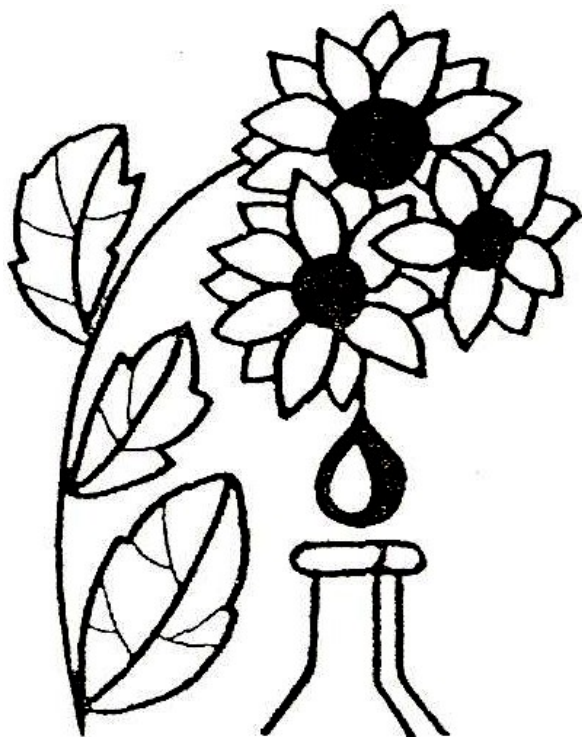
11. Space the plants 1 metre apart, or intercrop with beans, tephrosia or maize.
12. From the best plants, take cuttings.
13. Or propagate the plant by the "ground layering" method.
14. The plants need a lot of sunshine, a lot of water and a lot of compost.
15. As soon as the first flowers appear, harvest the whole plant. Strip the leaves from the tip of the branches to the base.
16. Remove all the stems, cut the leaves into small pieces, and dry within 3 days.
17. Rub the dried leaves through a sieve and give the remaining stems to your animals.
18. Artemisia tea, in a labelled and sealed bag, ready for use. Store in a dry place.

Illustrations: Bindanda Tsobi, Kinshasa

Information and Copyright: www.anamed.org

Caution: Stress!!! Use the hoe regularly and give the plants plenty of water. The ground must be kept moist, particularly during the first two weeks after planting. Constantly add more mulch around the plants. The plant reacts to stress, and the main cause of stress is lack of water. Then it feels insulted, shuts up shop and dies. Scientifically expressed, the dryness causes a hormone change which leads to flowering within about 4 weeks, after which the plant dies. Once this process has commenced one can do nothing to stop it. If you take cuttings during this phase, they may begin to grow, but the new plants will also flower and die within a few weeks.

When the plants are 50cm high, you may fertilise them once a month. We recommend natural manure, such as well-composted animal dung. Only when you have no alternative should you use a synthetic fertiliser. In this case, try an N-P-K fertilizer.



As stated above, A-3 is a special breed, the seeds should not be used as they mix with wild forms of *Artemisia annua*. Some will germinate, but the resultant plants will be weaker, very mixed in appearance, and have 30% less content of the medicinal compounds. This may be too little to treat malaria. You may, therefore, propagate your plants by taking cuttings.

5. POSSIBLE PLANT DISEASES AND ENEMIES.

- a) **Greenfly.** Normally, especially out in the open, this is not a problem, but in the greenhouse or living room an attack of greenflies can occur. Treat either a) with pyrethrum powder (trade name Spruzit or Parexan) but do not use pyrethrum solution – the artemisia will also be killed, or b) a neem preparation (see our seminar handbook, order number 109, or neem document, order number 117).
- b) **Leaf eating ants.** If, in the Tropics, your seedbed is attacked by ants, place the seedbed on a table, and stand each leg in a tin of used motor oil.
- c) **Ants** that build an ant-heap next to an artemisia stem. Work into the soil chilli powder, pounded neem (*Azadirachta indica*) or melia (*Melia azadarach*) seeds or pounded pyrethrum flowers. Alternatively put many stems and leaves of *Tithonia diversifolia* into a bucket filled with water for about 6 weeks and then water the affected plants with the filtered liquid.
- d) **Goats, cows, hens.** If animals instinctively wish to eat artemisia leaves to cure their intestinal worm infections or diarrhoea by eating your plants, you may admire their skills in self-help! Only in extreme cases is it necessary to erect a fence.
- e) **Mice, rabbits, birds.** Occasionally your very young plants may be attacked. Protect with mosquito netting or mosquito gauze.
- f) **Yellow or brown leaves.** This may happen on the inner branches in a plantation, especially if the plants are too close together. Either thin the plants out, or plant artemisia amongst other plants in a mixed culture. In this way the likelihood of plant diseases is reduced. Other possible causes are:
 - Lack of light – plant further apart.
 - The ground is too acidic; add lime to the ground.
 - A fungal attack after cold, foggy weather (unusual); spray with a neem preparation.
 - Lack of magnesium (also unusual); add compost.

The best solution is to try the plants in various locations and discover where they thrive best.

6. A POSSIBLE PROGRAMME IN NORTHERN COUNTRIES.

Whatever the time of year, sow a few of the seeds. As the plants grow, take cuttings again and again. Plant them out in spring.

Sow most of the seeds indoors from January to March. The young plants require plenty light, and the earth must always be moist. After some weeks, put into pots, and plant them in the open field in stages from mid-April to mid-May. The earlier plants may be damaged by frost, therefore ensure you still have some healthy plants in the nursery.

7. POSSIBLE PROGRAMMES IN SOUTHERN COUNTRIES.

Projects in the *anamed* malaria programme have succeeded in growing artemisia throughout the tropics and sub-tropics. We suggest:

If you live in the mountains, grow artemisia throughout the year. You will have no problems!

If you live in a hot, lowland area with a hot rainy season and a cooler dry season:

- a) if water is available throughout the year, sow artemisia in middle of the rainy season. Plant it out at the beginning of the dry season, and water it. This is the best arrangement, because artemisia thrives best in the temperature range 15 to 25°C. Grow it in the way that garlic and onions are grown in the Tropics, i.e. in fertile soil, with a mulch to prevent the soil drying out, and with regular watering. It should then be ready for harvest at the beginning of the rainy season, which is exactly the time when malaria is a big problem.
- b) if water is not always available, sow artemisia in the dry season and plant it out at the start of the rainy season in a place where there is a lot of shade. Because of the heat, the plants may not grow so high.

In general, whatever the time of year, sow a few of the seeds. Learn how best to cultivate artemisia in your region by growing it in a variety of locations and sowing at different times of year. As the plants grow, take cuttings at regular intervals.

8. HARVESTING AND DRYING.

Artemisia tea may be prepared from fresh leaves. 25g of fresh leaves corresponds to the recommended daily dose of 5g of dried leaves for malaria patients. This is fine if you always have plenty of healthy artemisia plants close at hand. Usually, however, it is always helpful to have a good supply of dried leaves all through the year.

There are two methods of harvesting. You must decide which is most suitable for your situation.

1. Regular harvesting: Once the plant is about one metre high, cut the branches to reduce the height of the plant by half. Harvest the leaves from the cut branches. Provided the plant is healthy and well-watered, it will quickly produce new shoots and leaves. When the plant has grown once again to a height of about one metre, about two months later, repeat this procedure. Tea made from these leaves is effective in treating malaria, even though the artemisinin content is highest just before the plant flowers. Harvesting repeatedly in this way, every two months, gives the maximum yield of leaves.
2. Harvest once: Every day, examine every plant for signs of flowers. As soon as a plant shows the first sign of flowering, immediately harvest all the leaves, and certainly within 7 days. When the plant flowers, the leaves become smaller and smaller, and eventually the plant is full of flowers but no leaves. These flowers contain a lot of artemisinin, but the total harvest from flowers is small compared with the harvest from the leaves. Plants that have flowered must be pulled out as they will never produce leaves again. The stems can be used as animal feed (see further uses of artemisia).

If you do miss the correct harvest time and the artemisia is already flowering or even going to seed, these plants can still be used to treat malaria. The flowers may also be used either with boiling water as an inhalation for bronchitis, or for making artemisia ointment (useful for skin problems and haemorrhoids). The concentration of volatile oils is highest in the flowers, and these oils are absorbed into the ointment.

Some Europeans suffer allergies from the pollen of plants of the artemisia family, so Europeans are best advised still to use only the leaves.

Method A. This procedure takes a lot of time but yields beautiful dark green tea-leaves. We always use this method for *anamed* teas! With one hand, firmly hold the end of the branch, with the other, strip the leaves from top to bottom. You may like to wear gloves! Remove all the stems from your harvest. Lay the leaves on a board and, with a sharp knife, cut them into small pieces 1cm long (like in Europe we cut chives, and in Africa vegetable leaves). Dry them as carefully as possible within three days at a temperature under 40°C. If the air is humid, dry in the sun, if dry, then in the shade. In any case, the leaves should be dried within three days. Then remove any remaining stems by rubbing the leaves through a sieve with holes the size of or double the size of those in a metal window mosquito grid. You could make a home-made sieve yourself from such a grid.

Method B: Cut branches from the plants, remove any brown leaves and either hang the branches from strings inside a greenhouse, or lay them on shelves made of fine metal grids, again inside a greenhouse. The greenhouse may be made simply from a wooden frame covered with polythene. After about two days the branches can be shaken, and the leaves will fall off. Dry the leaves further on plastic or textile sheets.

When are the artemisia leaves dry enough?

Artemisia tea should only be packed and stored once you are certain it is dry enough.

Rough test (The snap test): Take a small stem remaining in the tea and bend it through 90° (a right angle). Does the stem bend? Yes? The tea must be dried more. Does the stem snap? Yes? The tea may be packed and it will keep for one year.

Rigorous test: Put a hygrometer in an air-tight container together with 50g leaves at around 25°C. If after 30 minutes the hygrometer shows the air humidity to be 40%, this indicates that the leaves have a moisture (i.e. water) content of about 4% and that they will keep for one year. If the hygrometer reads 30%, the moisture content is about 3% and the leaves will keep for 3 years.

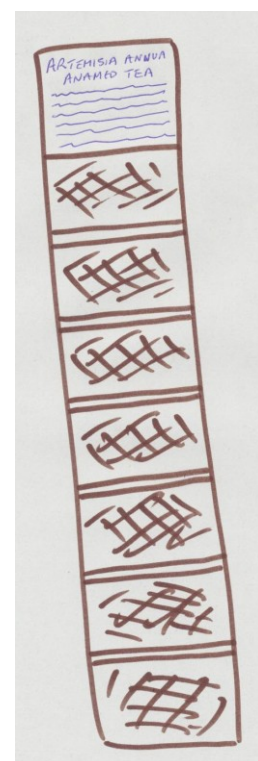
9. YIELD

If the plants are spaced at intervals of one metre, then 1 plant per square metre corresponds to 10,000 plants per hectare. Under optimal conditions, that gives 45 tons of fresh plants. Of those 45 tons, 15 tons are stems, and a further 27 tons of water are lost in drying. Thus, the product is 3 tons of dried leaves.

If we assume an artemisinin content of 1%, 3 tons of dried leaves contain about 30kg artemisinin. Since the pharmaceutical treatment for malaria requires 1 gram of artemisinin per treatment, the yield is enough for 30,000 treatments. Thus, one plant yields 3 treatments.

If, however, the dried leaves are used to prepare artemisia tea, since one treatment requires 35 grams of leaves, there are enough leaves for more than 85,000 treatments. Thus, one plant yields between 8 and 9 treatments.

In general, we recommend a mixed culture. Therefore spread 10,000 plants over 2 or more hectares.



10. QUALITY

The leaves make tea of good quality if they contain no stems or flowers, the colour is dark green and not grey or brown, and they are well-dried.

The artemisinin content can be measured in universities. The cheaper option is using thin layer chromatography, the better, more expensive option is high pressure liquid chromatography (HPLC).

11. PACKING, STORAGE and LABELLING

The ideal way to package artemisia leaves is in a polythene tube, divided into 7 compartments, each of which contains 5g of leaves. The divisions between each compartment are made by sealing the sides of the tube together, either by machine or in a candle flame.

The label should contain the following information:

- Your name, or the name of your organisation.
- “Artemisia annua anamed tea”
- The date of production, and the "use by" or “expiry” date.
- “Instructions: For malaria, pour 1 litre of boiling water over one sachet of tea, allow it to stand for 15 minutes and drink in the course of the day. Continue for 7 days.”
- “Please dispose of the used bag properly, e.g. by burying deeply, to protect the environment.”

You may like to prepare your own leaflet, to give your patients or customers more information about the various uses for artemisia tea, and how to take it for different illnesses.

Store these bags in another airtight container, e.g. a tin or barrel, so that they are also in the dark. Take the bags out of the barrel only a few days before use or sale.

12. PRICING

A price midway between those for malaria cures with Fansidar and quinine is normally acceptable.

13. INFORM THE AUTHORITIES!

Seek to win their approval. Inform the Ministry of Agriculture that artemisia is already grown in many tropical countries, encouraged by the WHO. The biggest plantations are in South Africa, Kenya and Tanzania. Show officials in the Ministry of Health the copy of the certificate awarded to our *anamed* colleague Innocent Balagizi in Bukavu, D R Congo, from the WHO “Roll Back Malaria” Programme (the blue sheet in the *anamed* Artemisia Starter Kit). Give the officials a plant and an *anamed* poster of medicinal plants. If necessary, ask your Bishop to speak with the Ministries on this matter. Health and social welfare are equally important for the church and the state.

Growing *Artemisia annua anamed* (A-3) in very hot and dry conditions

Some *anamed* partners have had trouble growing A-3 in very hot and dry climates. The following tips may be helpful. Most are taken from the book "Managing Dryland Resources" which is published by the International Institute of Rural Reconstruction¹. Many of the ideas below are intended either for tree seedlings or vegetables, but they are all relevant to A-3.

I Care in the nursery

1. Water the seedlings twice a day – preferably with rain water from a rainwater storage tank.
2. Ensure that the nursery is well-shaded – preferably with shade giving and soil improving trees.
3. If goats and other roaming animals are a problem, protect with thorn branches.
4. Keep the nursery free of weeds to reduce competition for space and nutrients, and to control pests and diseases.
5. Prepare the seedlings for transplanting into the field by gradually reducing the amount of shade.

II Planting out

Before being planted out the seedlings must be strong enough to survive the harsh conditions. They should be about 15cm tall and have a well-developed root system.

Prepare the holes as follows:

1. Dig a hole 50 cm wide and 50 cm deep, keeping the top soil and sub soil separate.
2. Mix the top soil with compost, twigs and leaves.
3. Put some of this top soil / compost mixture back to a depth of 30 cm.
4. Stand the seedling in the hole and cover the roots with the soil mixture.
5. Water thoroughly, making sure that the water drenches the roots.
6. Cover the soil around the plant with mulch.
- 7.

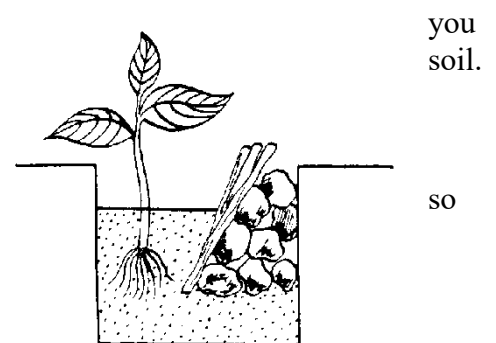
III Useful tips if water is scarce

The following are ways to ensure that, when water is scarce, the water have reaches the roots and does not just drain away into the surrounding

A. Stone method

When planting the seedling, place stones in the hole beside the root ball, that water trickles down to the seedling roots.

Do not let the stones touch the seedling, so that they cannot squash the stem. The stones should be about the size of a fist. Do not use very small stones, or the spaces between them will quickly fill with soil.

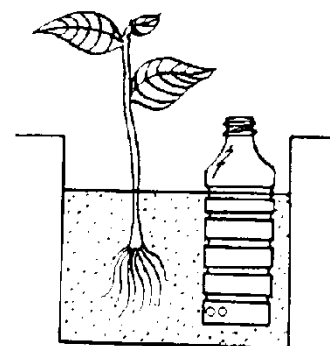


¹ "Managing dryland resources: A manual for eastern and southern Africa", International Institute of Rural Reconstruction (IIRR), 2002. Available from IIRR, Africa Regional Office, P O Box 66873, Nairobi, Kenya. Email: library@iirr-africa.org.

B. Recycled container method

Choose a 1 to 2 litre container such as a tin, clay pot or plastic bottle, and punch a small hole near the bottom. Half bury the container beside the seedling, so the hole faces the roots. Fill the container with water and loosely cover the top to prevent evaporation. Refill the container regularly.

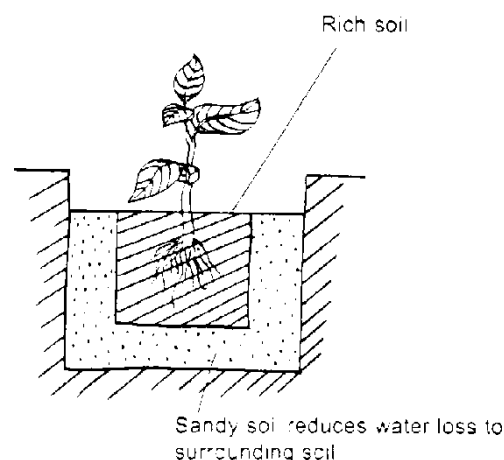
A sturdy glass bottle can also be used. Fill it with water and push it upside down at an angle into the soil beside the seedling. Cover the top of the bottle with grass or soil to prevent it from being heated by the sun, because the hot water would scorch the roots. Use clear glass bottles, because coloured bottles heat up more easily.



C. Sand-planting method

This method works because sandy soil holds more water than clay soil.

Before planting, place a cylindrical or square container, open at both ends, in the middle of the planting hole. Fill the gap around the outside of the container with sand or coarse sandy soil. Plant the seedling inside the container, and then pull the container out and use it for the next seedling. The layer of sand holds water around the seedling roots.

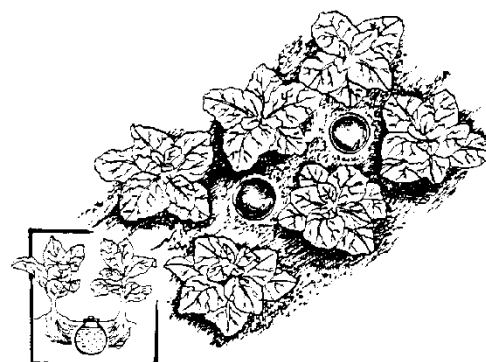


D. Microcatchments

On very gentle slopes, build a 'V' shaped or semi-circular wall of earth on the lower side of the seedling. When it does rain, water will flow down to this wall and a pool of water will collect.

E. Clay pot irrigation

In between every four plants bury a burnt porous clay pot so that its top is level with the soil surface. The pot should hold at least 2½ litres. Pour water into the pot and put a lid on top. Refill the pot periodically, depending on how fast the water percolates into the soil. The roots will grow towards the pot to draw on water and nutrients. Few weeds will grow because the surface of the soil remains dry.

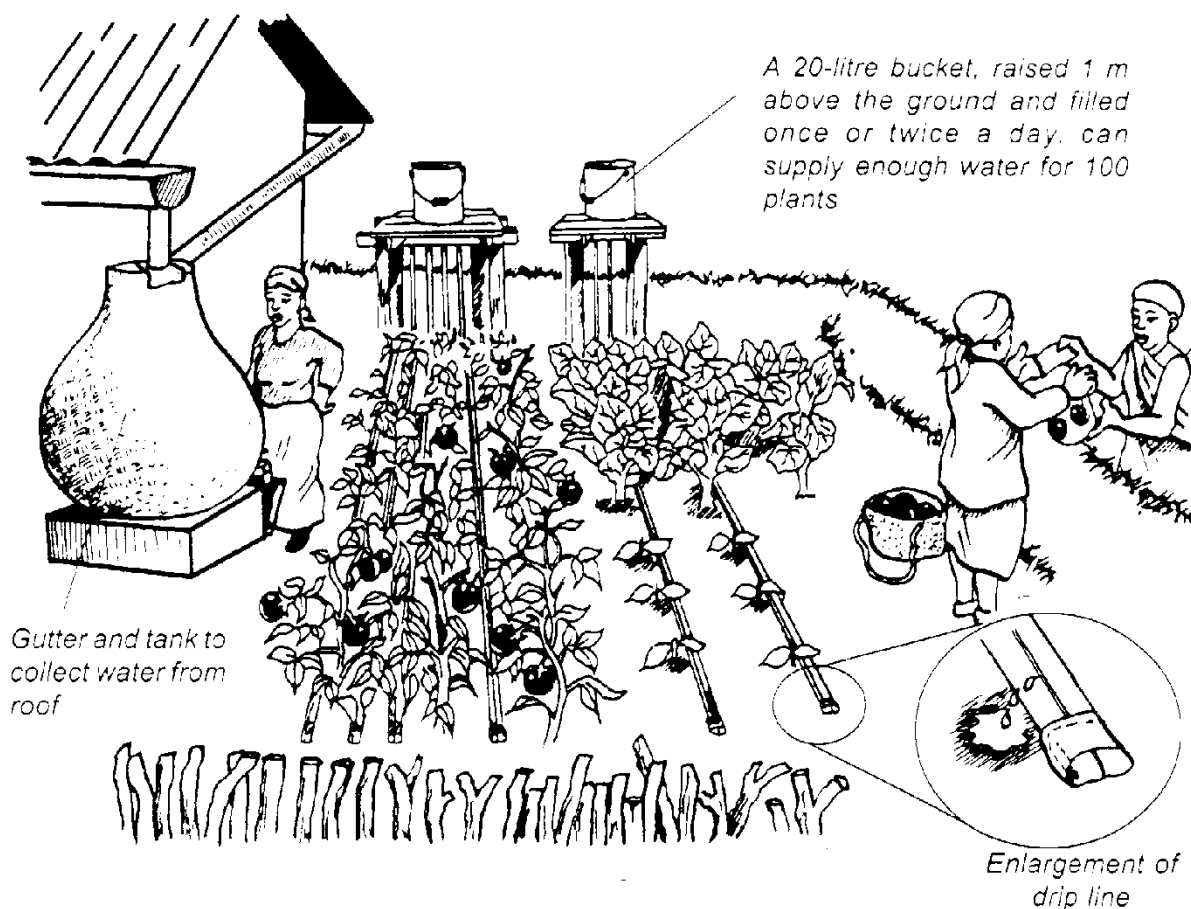


F. Drip irrigation

Bucket-kit drip irrigation is a simple, effective way to irrigate small gardens with a minimum of water. Water flows through plastic tubes called drip lines from a bucket placed 1 metre above the ground. The drip lines come ready made with very small holes (drip outlets). Drops of water leak through the holes and soak into the soil.

The bucket holds 20 to 30 litres of water. The connection in the base contains a simple filter which prevents silt clogging up the pipes and drip outlets. This system can provide enough water for about 100 plants using 2, 4 or 6 drip lines, none of which should be longer than 30 metres.

The drip lines apply water uniformly along their length.



HOW TO DRY THE LEAVES

CUT BIG LEAVES

You can win the leaves in 3 ways:

- Use the left-over big leaves when you make cuttings.
- Cut leaves regularly like you do it with Pigweed / Bondwe.
- Cut the whole plant immediately when it starts flowering. This is the recommended method as the Artemisin content is the highest.

DRY FOR 3 DAYS

Remove all stems and cut the leaves into peaces of 1cm length. Dry the leaves for 3 days at a temperature below 40°C. If it is cold, place them in the sun, otherwise in the shadow. You can dry the leaves in a box, a mosquito net or even an old newspaper.

CRUMBLE & STORE

Remove any remaining stems and make a very fine powder, i.e. by using a sieve. Store the dry tea powder in a lockable container in a dark place. Put a label on it. Use it when you need it!

For further information:
www.anamed.net
anamed@t-online.de

HOW TO PREPARE: STOP MALARIA ARTEMISIA TEA

BOIL WATER



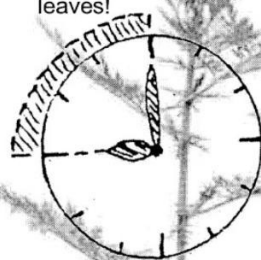
Let the tea stand for 15 minutes, then filter or drink together with the leaves.

If you have no dried leaves but only fresh leaves use 5 times the amount of dried leaves!

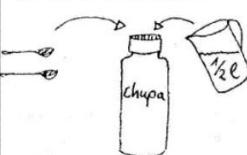
DOSAGE FOR ADULTS



Pour one litre of boiling water over 4 heaped teaspoonfuls of dried leaves.



YOUNG CHILDREN



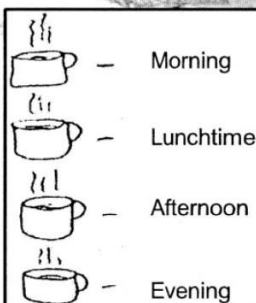
Pour half a litre of boiling water over 2 heaped teaspoonfuls of dried leaves.

BABIES



One quarter of a litre of boiling water over 1 heaped teaspoonful of dried leaves.

**DRINK ONE
QUARTER OF THE
TEA ALL 3 HOURS,
4 TIMES A DAY**



**TO STOP
MALARIA. DRINK
THE TEA
FOR 7 DAYS!**

STOP MALARIA WITH ARTEMISIA

ARTEMISIA is one of the most effective plants for Malaria treatment today. Here in Zambia, the **ARTEMISIA** bush grows well and up to 3m high and 1m wide.

The leaves can be harvested like Bonko or Bondwe and a tea is prepared to **STOP MALARIA**. **ARTEMISIA** can be grown by everybody who is willing to invest some time, work and water.

This booklet shows you how to grow, harvest and multiply **ARTEMISIA** and how to prepare the **STOP MALARIA** tea.

Please make cuttings regularly to multiply the plant. Give new plants out to your neighbours and tell them how to grow and use. As much people as possible should profit from **ARTEMISIA** to **STOP MALARIA**

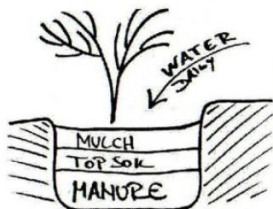
HOW TO GROW & MULTIPLY ARTEMISIA

A) WATER YOUR ARTEMISIA DAILY AND GIVE IT SOME SUN



Find out which place your Artemisia likes most. In a cold time it might love the sun, in a warm time it might prefer shadow. Give it some water daily. You even can place a small waterbowl below it

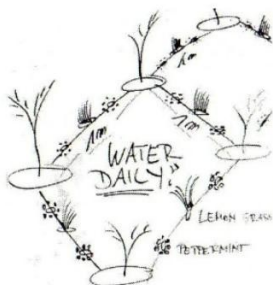
B) WHEN THE PLANT IS 1 HAND HIGH: PLANT IT OUT INTO THE GARDEN



Dig a pothole 30x30 cm wide and 30cm deep. Fill half of the height with manure & organic compost and make it very wet with 1-2 buckets of water. Fill up with top soil and make also this layer wet.

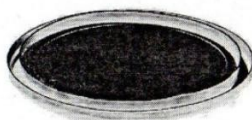
Water the Artemisia in the mug so that you can easily remove it out of its mug. Take it out completely with all the soil and roots in the mug.

Make a hole in the top layer of the pothole and plant the Artemisia into the pothole. Press the roots firmly into the ground but leave the top of the soil very loose. Cover with mulch. Give the plant water to start growing. Water your young Artemisia daily!



If you have more than one plant, plant them in rows with 1m distance to each other. Also the rows should have a distance of 1m. This ensures that the plant has enough space and can grow up to 3m high and 1m wide. You can plant Lemongrass and Peppermint between the Artemisia plants.

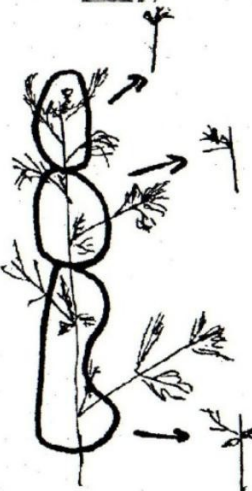
C) 4 WEEKS AFTER PLANTING OUT: TAKE YOUR FIRST CUTTINGS



1. Make a seedbed which you can keep moist. Fill the seedbed with very fine and clean top soil or with sand. Let it soak water for some minutes.



2. Choose a strong plant. It should be well growing. Cut the upper stem of the plant (max. 1/2 of the plant). Use the chance to give your Artemisia plant a good cut for the future. Cut the stem where the plant profits most. Remove also old leaves. Place the stem which you have cut on a piece of paper or another clean place to work with it,

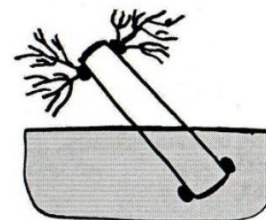


3. Remove the big leaves from the cut stem with a sharp blade or a scissors. Leave only the small leaves on the cutting. Keep the cut leaves in a shady place for drying and making tea.

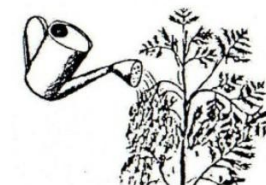
4. Cut the big stem into pieces, each piece with at least two nodes (a node is where the leaves come out). The upper node later will develop leaves, the lower roots.



5. From the top node remove only the big leaves and keep the small leaves. From the lower node of the cutting, remove all leaves, also the small ones. Cut the stem very short above and below the nodes to avoid rotting.

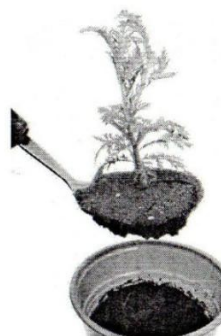


7. Plant the cutting into the seedbed with an angle of about 30° - this enhances root growth. The lower node must be placed into the soil and the whole cutting should be at least 1cm in the soil.



8. Keep the soil moist and water every day. Put it on a shady place for the first 2 weeks. Be careful when watering so that you do not destroy the small plants. Place it in the sun after 2 weeks and look how it grows.

D) 4 WEEKS AFTER CUTTING: TRANSPLANT IT INTO A MUG



9. Use a spoon to take out the plant carefully with all the roots in the surrounding soil.

Place the plant with the soil into a prepared mug - you already know - filled with 1/2 small cattle manure and 1/2 top soil.

Go on with A) WATER YOUR ARTEMISIA DAILY AND GIVE IT SOME SUN ...

D A-3: Drugs home-made!

Caution: Take great care to observe good hygiene and follow these instructions accurately. We advise you to attend our practical training seminars or to ask a pharmacist to prepare the more complicated medicines for you. Please also observe the safety instructions at the end of this brochure! Please note that the XYZ initiative only provides D-1 and D-2. You must produce all other medicines yourself. Note that we do not answer any questions about production.

D-1: A-3 sieved tea.

To produce A-3 tea, see above. Store in a glass jar. The container must be airtight, and the tea protected from the sun. You can judge the quality of the tea by how few stems it contains, by the absence of flowers, and the absence of discoloured yellow or brown leaves. (Stems have no medicinal value and flowers may cause an allergic reaction.)

D-2: A-3 powdered tea.

To produce A-3 powdered tea, see above. Store in a glass jar. The container must be airtight, and the tea protected from the sun.

If you cannot stand the bitter taste, take A-3 powdered tea and mix it with yogurt, peanut butter or mashed bananas.

If you have the ordinary, sieved A-3 tea, you can powder the tea yourself using a standard coffee grinder.

Dosing table using measuring cups or kitchen spoons

A-3 sieved tea:

1g	volume about 5ml (a level teaspoon)
1.25g	volume about 6ml (less precise: a slightly rounded teaspoon)
5g	volume about 25 ml (less precise: an old-fashioned film container or 2 tablespoons)

A-3 powdered tea:

1g	volume about 3ml
1.25g	volume about 4ml (less precise: 2 level teaspoons)
5g	volume about 15 ml (less precise: 2 rounded teaspoons)

D-3: A-3 capsules.

Commercially available moringa or artemisia capsules are 4 to 10 times more expensive than our products. If used for treatment, for example for tumours, you may well not give an adequate dose. The quality may also be poor; suppliers may fill capsules with dirty or mouldy artemisia. If you want capsules, you may fill empty capsules yourself with either artemisia or moringa using powder from XYZ ***. This procedure is relatively easy and inexpensive, see internet, in Germany <http://www.junalis.de/kapseln-kapselfueller>. Empty capsules are available in each pharmacy or from the internet. But even empty capsules cost more than the tea they contain. The capsule size "0" (normal capsule size) can take, with care, 450 mg of Artemisia annua anamed powder. So a daily dose of 5 g would require 11 capsules!

One capsule contains about 4.5 mg of artemisinin plus at least 4.5 mg of substances equivalent to artemisinin. Thus 11 capsules would contain $9\text{mg} \times 11 =$ approximately 100 mg of artemisinin (equivalent).

Note: XYZ *** does not supply capsules!

D-4: A-3 Tincture

--- **for external use:** Mix 10g of powdered artemisia leaves with 100 ml of 70% alcohol. Put into an airtight glass jar, store at room temperature and shake once a day. After one week, filter and squeeze the residue and store the liquid in the same glass jar in a dark place. Use for skin problems where ointment would be unpleasant (for example on the scalp).

--- **for internal use:** Mix 20g of powdered artemisia leaves with 100 ml of 70% alcohol. Put into an airtight glass jar, store at room temperature and shake once a day. After one week, filter and squeeze the residue and store the liquid in the same glass jar in a dark place.

For internal use, the high dose is 12.5 ml, twice a day (i.e. one tablespoonful twice a day; the dose corresponds to approximately 5g of artemisia per day). The low dose is 6.25 ml (i.e. one teaspoonful in the morning; the dose corresponds to approximately 1.25g of artemisia per day). It is better to use a measuring cup if possible. Note: XYZ *** does not supply tinctures.

D-5: A-3 DMSO Extract: Recipe for anamed-A-3-DMSO extract.

DMSO was first known as a chemical solvent and became later used as a medicine. In this formulation DMSO is used as a "carrier" to enable the components of A-3 to penetrate the skin more deeply. Mix 50g of A-3 powder with 150ml of pure pharmaceutical DMSO in an airtight glass container. Store at around 20 degrees centigrade in the dark or darken the jar with aluminium foil. Stir the contents once a day. After 3 days, filter through a multi-layer cloth. Squeeze the residue manually (use no electric machine). Wear protective glasses. Do not heat on a stove, as it may explode.

Store the filtrate in a dark place. Add 75 ml of DMSO to the residue, shake well, let it stand for 1 day and then filter and squeeze again.

Repeat this procedure once more, Add 75 ml of DMSO to the residue, shake well, let it stand for 1 day and then filter and squeeze again.

After combining the three filtrates, the total volume will be about 150 ml. This filtrate is now called the extract. Store this extract in a purple or brown glass bottle and completely wrap it with aluminium foil to prevent any light from reaching the extract. Fill the extract in 30 ml- bottles out of purple or brown glass and screw on an appropriate glass/rubber pipette.

Stored in this way, the extract will keep for about 3 years. Keep away from children. An extraordinary feature of this solution is that if 5 drops are added to a glass of water, the mixture becomes a fluorescent green.

It is not possible to buy this product with such a fluorescent quality! Therefore, make it yourself, for example during one of our seminars, or ask your pharmacist to make it.

Use externally on warts and skin tumours. Precursors of white skin cancer ("actinic keratosis") may be treated by swabbing the affected area once a day for 14 days. Continue the treatment with artemisia ointment. Or mix the gentle acting A-3 ointment with the more aggressive DMSO or with the A-3 DMSO extract in different proportions depending on the reaction of the skin.

Do not store in plastic boxes because DMSO dissolves plastic! You can find out more about DMSO, not by contacting us, but by reading "Fischer, the DMSO Handbook" (see internet).

D-6: ARTEMISIA OINTMENT

Equipment required

2 saucepans, one small, one large, for the water bath,

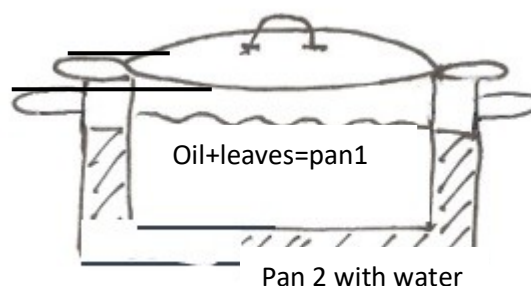
1 graduated cup, filter cloth and clothes pegs, small containers, for example film or ointment containers,

an electric coffee grinder to grind the leaves.

Oils and ointments are a convenient way to use

herbal medicines to treat all kinds of skin conditions - rashes, cuts, bruises, sprains, burns, wounds ...

There are other benefits: ointments can be kept for several years - which is very useful if the plants are not available all year round. A hospital pharmacy or health centre can always have a good supply of ointments, and community groups in developing countries can generate a small income by producing and selling ointments.



Make this artemisia ointment yourself: Mix 2.5 g of dried, powdered leaves of A-3 with 100 ml of olive oil (cheaper: sunflower oil; castor oil from the pharmacy is even better but more expensive). Heat on a water bath for one hour, filter through a filter cloth, add 10g of melted beeswax, stir and pour into clean containers. Important: NO water must enter the ointment, otherwise it will deteriorate quickly. Well prepared, it can be stored at room temperature for 1 to 3 years.

- In the case of chapped hands and feet, always apply ointment to WET skin and rub in until the ointment is absorbed.
- Wherever cortisone has been recommended, see if A-3 ointment in combination with drinking A-3 tea works just as well.

Examples of use:

- As an ointment in the genital area.
- Haemorrhoids: Wash your anus after each bowel movement, then apply a little A-3 ointment. Also apply in the evening before sleeping.
- Wounds, sores of people in wheelchairs, bedsores: apply A-3 ointment twice a day.
- Diaper dermatitis, athlete's foot, neurodermatitis, psoriasis, acne, rosacea, herpes: with a dry, clean implement take the required amount from the ointment container and massage the ointment on very wet skin (!) three times per day. (Commercial ointments often worsen the skin problem of very young children because of the perfumes and preservatives they contain!)
- Rough hands: Wet your hands completely, then massage ½ teaspoon of A-3 ointment until the hands are dry. Wet your hands again and now add ½ teaspoon "moisturizer" until your hands are dry. This moisturizer may be very finely sieved cassava powder or maize powder (in Germany commercially sold under the name *Mondamin*)
- Cracks on the fingers (e.g. cuts in the skin on the knuckles in winter): Apply A-3 ointment in the evening, bandage the finger with an adhesive bandage, hold the finger in the water and keep it moist overnight. The pain should go away immediately; if not, choose another method. Work as hygienically as possible to avoid wound infections. Change the dressing the next morning. Experience shows that the wound heals from the inside. If not, try another method!
- We have had good experiences with eczema, also in children, where the doctor had no suggestion other than cortisone. Always give extra artemisia tea to drink

E A-3: In malaria: prophylaxis and therapy

We offer the following recommendations on the basis of our experience to date with “A-3”. It is a special breed, but not genetically manipulated! It not only has the advantage that it grows easily in the tropics, but also that it contains about 20 times more artemisinin in its leaves (1%) than wild plants (0,05 % on average).

Malaria is caused by an infection with *plasmodium malariae* / *ovale* / *vivax* / *falciparum*. All these parasites “eat” red blood cells, and as a result the parasites develop a very high content of inorganic iron in their cells. Artemisinin destroys cells with a high iron content and is therefore effective for all these four malaria types.

In the field of malaria prophylaxis and treatment, the achievement of *anamed* was to discover that tea (or powder) made from this special breed, A-3, is very effective. Many people say that it is even more effective than the commercially available artemisinin-based ACT drugs. The dosages we use are based on those given in the IX Chinese Book of Drugs, information in Hagers handbook and on our own analyses made in the University of Tübingen in Germany.

DOCUMENTED RESULTS OF MALARIA TREATMENT WITH *ARTEMISIA ANNUA*

In the *anamed* document “*Artemisia annua anamed: From research to experience*” (order number 220), some publications are mentioned which document the results of treatment with artemisia alone. In his book², Dr Merlin Willcox presents a summary: *Artemisia annua* was administered to 899 patients as tea, powder or tincture. The success rate varied between 70% and 100%, and the recrudescence rate between 8 and 39%.

anamed Bukavu treated 254 patients with artemisia tea, as described in this document, 93% of the patients were cured, and the recrudescence plus reinfection rate was 13%³. Further studies by Dr Müller et al (2004)⁴ showed a 70% success with 39% reinfection plus recrudescence. But reports from our own A-3 partners worldwide with more than 34.000 patients described an average healing rate of 94%.

E-1: PREPARATION OF A-3 TEA

Table II: Daily dosages of artemisia tea for children and adults

Weight of patient (kg)	Age	Artemisia tea taken orally. ..g leaves in ..ml of water per day for 7 days
5-6	2-3 months	0.5g/100ml
7-10	4-11 months	1g/200ml
11-14	1-2 years	1.5g/300ml
15-18	3-4	2g/400ml
19-29	5-9	3g/600ml
30-39	10-11	3.5g/700ml
40-49	12-13	4g/800ml
50+	adults	5g/1000ml

Do not make tea in simple iron pots, as artemisinin reacts with iron! Stainless steel is o.k. For adults of 60 to 70 kg, pour one litre of boiling water over 5g of dried leaves of A-3 (or 25 grams of fresh leaves), leave to cool for 15 minutes and then filter. Divide the tea into 4 equal amounts, and drink at six hourly intervals. (You need a good scale! If not, either use the fact that 5g of sieved leaves is the amount that just fits into a plastic 35mm film container or use 4 rounded teaspoonfuls.)

² Dr Merlin Willcox et al. (Ed.) (2004), “Traditional Medicinal Plants and Malaria” CRC Press, London, p48.

³ Anamed publication 3/2014, order number 220, “A-3: From Research to Experience”

⁴ Müller M. et al (2004), “Randomised controlled trial of a traditional preparation of *Artemisia annua* L. in the treatment of malaria.” Trans. Roy. Soc. Trop. Hyg., 98(5), 318-321.

E-2 TREATMENT ACCORDING TO IMMUNITY

In this section we have combined the recommendations of the World Health Organisation concerning commercial anti-malarials with *anamed's* experience with artemisia tea.

We encourage you to learn from and trust your own experience as you treat malaria patients!

A) 100% immune people are adults that never contract malaria.

B) 75% immune people

These are adults, excluding pregnant women, who live in a region where malaria is endemic and are infected nearly every day but either never, or hardly ever, suffer from malaria. If they do contract malaria, they treat themselves with any one of about 1000 anti-malarial plants available in nature such as neem, pawpaw, guava, ginger.

C) 50% immune people ("semi-immune")

These are adults, excluding pregnant women, who live in a region where malaria is endemic. When they contract malaria, they can also treat themselves with anti-malarial herbs. Table I on page 7 provides a guide for which plant can be used depending on the fever or, for those patients who have malaria but no fever, on the severity of other symptoms.

If 50% immune people suffer a recrudescence, they should take artemisia tea plus a conventional treatment such as chloroquine or Malarone, or even another herbal treatment like tea of the bark of the cinchona tree or tea made from neem leaves. However, do not combine artemisia tea with Halfan. If the patient has a very high fever, then one of these chemical remedies should be taken together with the artemisia tea on the first day.

Table III. Amount of amodiaquine or chloroquine to be taken in addition to artemisia tea

Weight of patient (kg)	Age	Amodiaquine/ Chloroquine 100mg Base Total no of pills to be taken over 3 days *
5-6	2-3 months	1.5
7-10	4-11 months	2.5
11-14	1-2 years	3.5
15-18	3-4	4.5
19-29	5-9	7
30-39	10-11	9
40-49	12-13	12
50+	adults	15

* i.e. each day take one
third of this dose

D) People with no immunity (0%)

These include tourists, AIDS patients, children aged between 0 and 5 years and Africans who live in mountainous regions where there is no malaria. Such patients should always be given artemisia tea plus another treatment, as described under C above.

E) Pregnant women

During the first trimester, the medication recommended by the WHO is artesunate or quinine. Recent research (2015) found “In two studies comparing intravenous quinine with intravenous artesunate, intravenous artesunate was more efficacious and safe for use in pregnant women”⁵. Thus, if there is no

⁵ Kovacs, Stephanie D., Marcus J. Rijken, and Andy Stergachis. “Treating Severe Malaria in Pregnancy: A Review of the Evidence.” *Drug Safety* 38.2 (2015): 165–181. *PMC*. Web. 15 May 2018.

alternative, we believe that artemisia tea may be taken at the doctor's or your own risk during the first 3 months of pregnancy. During the second and third trimesters, artemisia tea may certainly be taken, but still preferably under the supervision of a doctor.

E-3 NOTES ON TREATMENT

- a) It is proven that with the help of flavonoides in the leaves, nearly all the most active ingredient, artemisinin, is dissolved into the tea by the boiling water. Some of our partners, however, propose the following: Pulverise the dried leaves just before you pour boiling water over them, and leave to draw for 15 minutes; do not filter, but instead, 4 times a day shake this tea and drink everything (including the powder). The body's digestive system may then extract more from the leaves. Other patients have found that the tea is too bitter for them. They powder the (clean!) dried leaves and mix them 4 x daily with some peanut butter or cream and swallow this, and afterwards drink a cup of water or lemongrass tea.
- b) If you are sure you have malaria, prepare two litres of Artemisia tea and drink one litre immediately and the other litre during the next 24 hours! And continue the cure until the seventh day!
- c) Co-workers with *anamed* have had some success with the following: With a slow rise in body temperature, take artemisia tea as the first treatment as described. If within two days there is an improvement in condition, continue taking the tea until you have had no temperature for at least two days (in total, between 7 and 12 days). If, however, within two days there is no noticeable improvement, start a conventional treatment, e.g. 150mg amodiaquine base four times daily for three days (adults), as well as taking A-3 tea.
- d) With a rapid rise in body temperature, see a doctor immediately, and follow the usual "normal" treatment, but take artemisia tea as well.
- e) If, in spite of such treatment, a high temperature and / or diarrhoea persist, you must be examined for other illnesses; e.g. bacterial infections, (enterobacteria such as salmonella or shigella, campylobacteria), amoeba (*Entamoeba histolytica*), virus infections (e.g. Dengue fever).
- f) Note for tourists: If a tourist has a temperature in the Tropics, s/he must begin a treatment for malaria. If at all possible, s/he should have a sample of blood analysed in a good laboratory.
- g) People who live in the Tropics and have a low immunity, such as AIDS or cancer patients, people suffering stress etc. can, in our experience, certainly reduce the incidence of malaria attacks by drinking one cup of artemisia tea every day (one teaspoonful of dried artemisia leaves to one cup of boiling water). Caution: We just do not know whether, after the prolonged use of artemisia tea in this way, there will be any side-effects.

WHEN MALARIA IS LIFE-THREATENING

The following treatments have been proposed by different *anamed* groups. As yet, our experience is limited. For legal reasons, therefore, do not consider the following as recommendations. If you do develop some experience in dealing with crisis situations (i.e. no doctor is available, there is no injection available, the patient is unconscious), please inform us of what you did and how successful the treatment was.

Enemas: Lay the patient on the belly, place a cushion underneath so that the anus is uppermost. Give the enema in the concentrations given below. In the absence of the proper equipment you can use a disposable syringe without the needle. Supervise the patient closely for one hour afterwards to ensure that the liquid is not expelled – if it is, give the same dosage again.

A. ARTEMISIA ENEMA:

To use artemisia tea as an **enema**, *anamed* Bukavu uses 3 times the dose of Artemisia in half the usual quantity of water - and please tell us your results!!! Continue as soon as possible with oral treatment (drinking the tea). So far, we only have the results of treating 6 patients. That is why we are very

interested to hear about your experiences! If these enemas really work, thousands of children could be saved in regions where no injections are available!!!

Table V. Dosages of Artemisia tea, taken orally or as an enema. (Update from 11/2014)

Weight of patient (kg)	Age	Artemisia tea taken orally. ..g leaves in ..ml of water per day for 7 days	or Artemisia tea as an enema ..g leaves in ...ml of water per day until the patient regains consciousness
5-6	2-3 months	0.5g/100ml	1,5g/50 ml
7-10	4-11 months	1g/200ml	3g/100ml
11-14	1-2 years	1.5g/300ml	4,5g/150ml
15-18	3-4	2g/400ml	5g/200ml
19-29	5-9	3g/600ml	9g/300ml
30-39	10-11	3.5g/700ml	10,5g/350ml
40-49	12-13	4g/800ml	12g/400ml
50+	adults	5g/1000ml	15g/500ml

B. CHLOROQUINE OR QUININE ENEMA: Dissolve the usual dose of chloroquine or quinine tablets in a little water and introduce the solution into the anus.

C. MIXED ENEMA: In life-threatening cases, if there is no other way, you may try the following: Dissolve the usual dose of chloroquine or quinine tablets in the Artemisia enema and -maybe- add the usual dose of a powdered paracetamol tablet and introduce the solution into the anus. Please give us your results!!

SIDE EFFECTS, (see also chapter H)

Artemisinin is the most important isolated constituent. The WHO⁶ states: "Prospective clinical studies of over 10,000 patients and the use of artemisinin drugs in several million patients, including post marketing surveillance of over 4,600 patients in Thailand, has not shown any serious drug related adverse effects. The most common adverse effects reported following the use of artemisinin drugs are headache, nausea, abdominal pain, vomiting and occasional diarrhoea, symptoms that are associated with malaria and which are resolved with appropriate treatment...."

Artemisia tea: According to our experiences, and the literature, there are no noticeable side effects from drinking one litre of tea per day for up to 2 weeks. The only complaint is the bitter taste.

A cancer patient in Switzerland was sent home to die. That was 8 years ago! Since that date he has drunk artemisia tea every day (1 teaspoonful in a litre of water) and has not complained of any side-effects. It is helpful to collect such reports, but it is not impossible that one day side effects will become apparent. With serious illnesses such as cancer or AIDS, the advantages clearly outweigh any disadvantages; but both need to be checked in the laboratory wherever possible with the supervision of a doctor, especially if the condition of the patient deteriorates.

⁶ The use of artemisinin and its derivatives as anti-malarial drugs. Report of a Joint CTD/DMP/TDR Informal Consultation, Geneva, 10–12 June 1998. Geneva, World Health Organization, 1998 (unpublished document WHO/MAL/98.1086.



*E-4: Tea for Malaria, prepared with
FRESH LEAVES of A-3*

Body weight (kg)	Amount of fresh leaves per day (g)	inml water
5-6	2,5	100
7-10	5	200
11-14	7,5	300
15-18	10	400
19-29	15	600
30-39	17,5	700
40-49	20	800
50-75	25	1000
75-100	40	1000

Every 10kg body weight needs about 5g fresh Artemisia annua anamed leaves in 200ml water per day.



- Boil the required amount of water and pour it over the chopped fresh leaves. Leave it to cool for at least 15 minutes.
- Never boil an infusion! Never prepare Artemisia tea in an iron pot.
- Filter the tea, drink every 6 hours a quarter of the prepared tea, and finish the tea within 24 hours.
- In case of need, add a sweetener (e.g. sugar/ honey), but only to a portion (cup/ glass), never to the total amount boiled.
- Administer the treatment for at least 7 days
- If, within one day, the fever has not reduced even slightly, see a doctor, or add a conventional treatment.

Before you treat patients, please read the notes below. (updated here www.anamed-edition.com)

1. Pregnant women in the first Trimester:

Formerly there were many reservations about using artemisinin derivatives during the first trimester, and only quinine (30 mg per kg bodyweight per day for 7 days) was recommended by WHO. In the meantime (2010), however, WHO has changed its stance and states (1): *However, weighing these risks against the evidence that artesunate reduces the risk of death from severe malaria, both artesunate and quinine may be considered as options until more evidence becomes available. Treatment must not be delayed....* Therefore, if we do not receive any other feedback, we recommend that you take artemisia tea under the supervision of a doctor. Also drink 2 litres of lemon grass tea every day. (1)www.who.int/malaria/publications/atoz/9789241547925/en/index.html

2. Pregnant women in the second or third Trimester:

If there is a doctor, ask his advice. You may use "*anamed* artemisia tea" (see below): Drink one litre each day for at least 7 days. Also drink 2 litres of lemon grass tea every day. If necessary, you may add quinine tablets (30 mg quinine base per kg bodyweight per day for 7 days).

3. Breast feeding mothers

You may use "*anamed* artemisia tea" (see below): Drink one litre each day for at least 7 days. Also drink 2 litres of lemon grass tea every day. If necessary, you may add quinine tablets (30 mg per kg bodyweight per day for 7 days), or three tablets of sulfa-pyri*.

If the patient is unable to drink, try the following: Pour 500 ml of water over 10 g of dried or 50 g of fresh leaves, wait for at least 15 minutes, filter, and give as an enema (in 4 or more portions). In case of need, you may dissolve quinine tablets or syrup in this artemisia-enema: Dissolve 20 mg of quinine base per kg of bodyweight in the 500ml of enema liquid. Give this enema for seven days, or until the patient can drink again, when the medicine should be given as tea.

4. Children 2-3 months old (or bodyweight up to 6 kg)

Give a quarter of a sulfa-pyri* tablet once, or a total dose of 150 mg chloroquine base divided over 3 days, or a total dose of 150 mg amodiaquine base divided over 3 days. Give the child plenty to drink (boiled water, breast milk...).

If these drugs are either not available or not effective, then use artemisia. If the baby is willing to drink the tea, administer 25 ml of "*anamed* artemisia tea" (see below), 4 times daily, i.e. in total 100 ml per day, for at least 7 days. Most probably, the baby will more readily take "*anamed* artemisia sugar" (see below): Give half a level teaspoonful 4 times daily, i.e. a daily total of 2 teaspoonfuls.

If the baby is unconscious, try the following: Take quinine syrup, or dissolve quinine tablets (30 mg quinine base per kg bodyweight per day) in 50 ml of water, divide into 4 or more parts and give this as an enema during the day. Stop the enema as soon the patient regains consciousness, then give the necessary medicine by mouth.

If quinine is not available, you may try artemisia-enema: Pour 50 ml of boiling water over 1 g of dried or 5 g of fresh leaves, wait for at least 15 minutes, filter, and allow to cool. Administer this tea as an enema, divided into 4 or more doses, in the course of the day. Repeat this procedure for seven days, or until the patient can drink again. In the meantime, buy commercial medicine because artemisia alone may be not enough for this baby.

5. Children 4-11 months old (or bodyweight up to 10 kg)

Give half of a sulfa-pyri* tablet once, or a total dose of 250 mg chloroquine base divided over 3 days, or a dose of 250 mg amodiaquine base divided over 3 days. Give the child plenty to drink (boiled water, breast milk...).

If these drugs are either not available or not effective, then use artemisia. If the baby is willing to drink the tea, administer 50 ml of "*anamed* artemisia tea" (see below), 4 times daily, i.e. in total 200 ml per day, for at least 7 days. Most probably, the baby will more readily take "*anamed* artemisia sugar" (see below): Give a level teaspoonful 4 times daily, i.e. a daily total of 4 teaspoonfuls.

If the baby is unconscious, try the following: Take quinine syrup, or dissolve quinine tablets (30 mg quinine base per kg bodyweight per day) in 50 ml of water, divide into 4 or more parts and give this as an enema during the day. Stop the enema as soon the patient regains consciousness, then give the necessary medicine by mouth.

If quinine is not available, you may try artemisia-enema: Pour 100 ml of boiling water over 2 g of dried or 10 g of fresh leaves, wait for at least 15 minutes, filter, and allow to cool. Administer this tea as an enema, divided into 4 or more doses, in the course of the day. Repeat this procedure for seven days, or until the patient can drink again. In the meantime, buy the other medicine because artemisia alone may be not enough for this baby. For this age group, *Artemisia annua* may also be combined with proguanil or cotrimoxazol.

6. Children 1-2 years old (or bodyweight up to 14 kg)

If the child is willing to drink the tea, administer 75 ml of "anamed artemisia tea" (see below), 4 times daily, i.e. in total 300 ml per day, for at least 7 days. Most probably the child will more readily take "anamed artemisia sugar" (see below): Give a level teaspoonful 5 times daily, i.e. a daily total of 5 teaspoonfuls, for at least 7 days.

To be safe, add three-quarters of a sulfa-pyri* tablet once, or a total dose of 350 mg of chloroquine base divided over 3 days, or a total dose of 350 mg of amodiaquine base divided over 3 days. Give plenty to drink (lemon grass tea, cool, boiled water...)

If the patient is unconscious, try the following: Pour 150 ml of boiling water over 3 g of dried or 15 g of fresh artemisia leaves, wait for at least 15 minutes, filter and allow to cool. Add quinine tablets or quinine syrup (30 mg quinine base per kg bodyweight). Give as an enema, divided into 4 or more doses in the course of the day. Repeat this enema for seven days. As soon the patient can drink again, give all the medicine by mouth. For this age group, *Artemisia annua* may also be combined with proguanil, cotrimoxazol or Malarone.

7. Children 3-4 years old (or bodyweight up to 18 kg)

If the child is willing to drink the tea, administer 100 ml of "anamed artemisia tea" (see below), 4 times daily, i.e. in total 400 ml per day, for at

least 7 days. Most probably the child will more readily take "anamed artemisia sugar" (see below): Give 2 level teaspoonfuls 4 times daily, i.e. a daily total of 8 teaspoonfuls, for at least 7 days.

To be safe, add one sulfa-pyri* tablet once, or a total dose of 450 mg of chloroquine base divided over 3 days, or a total dose of 450 mg of amodiaquine base divided over 3 days. Give plenty to drink (lemon grass tea, water...).

If the patient is unconscious, try the following: Pour 200 ml of boiling water over 4 g of dried or 20 g of fresh artemisia leaves, wait for at least 15 minutes, filter and allow to cool. Add quinine tablets or quinine syrup (30 mg quinine base per kg bodyweight). Give as an enema, divided into 4 or more doses in the course of the day. Repeat this enema for seven days. As soon the patient can drink again, give all the medicine by mouth. For this age group, *Artemisia annua* can also be combined with proguanil, cotrimoxazol or Malarone.

8. Children 5-9 years old (or bodyweight up to 29 kg)

You may use artemisia: Pour 600 ml of boiling water over 3 g of dried artemisia leaves (or over 15 g of fresh artemisia leaves). Wait at least 15 minutes, then filter, divide into 4 cups and give one cup 4 times a day. Repeat this procedure for at least 7 days. If the child refuses to drink this tea, it will more readily accept "anamed artemisia sugar" (see below): Give two level teaspoonfuls 5 times daily, i.e. 10 teaspoonfuls in total, for at least 7 days. If this treatment alone is not effective enough, add one and a half sulfa-pyri* tablets once, or a total dose of 700 mg of chloroquine base divided over 3 days, or a total dose of 700 mg of amodiaquine base divided over 3 days. Give plenty to drink (lemon grass tea, water...) If the patient is unconscious, try the following: Pour 300 ml of boiling water over 6 g of dried or 30 g of fresh leaves, wait for at least 15 minutes, filter and allow to cool. Give as an enema, divided into 4 or more doses during the day. In case of need, you may dissolve quinine tablets (or quinine syrup) in this artemisia-enema (30 mg quinine base per kg bodyweight per day). Repeat this enema for seven days. As soon the patient can drink again, give all medicine by mouth. For this age group, *Artemisia annua* can also be combined with proguanil, cotrimoxazol, Malarone or primaquin.

9. Children 10-11 years old (or bodyweight up to 39 kg)

You may use artemisia: Pour 700 ml of boiling water over 3,5g of dried artemisia leaves (or over 17 g of fresh artemisia leaves). Wait at least 15 minutes, then filter, divide into 4 cups and give one cup 4 times a day. Repeat this procedure for at least 7 days. If this treatment alone is not effective, add two sulfa-pyri* tablets once, or a total dose of 900 mg of chloroquine base divided over 3 days, or a total dose of 900 mg of amodiaquine base divided over 3 days. Give plenty to drink (lemon grass tea, water...).

If the patient is unconscious, try the following: Pour 350 ml of boiling water over 7 g of dried or 35 g of fresh leaves, wait for at least 15 minutes, filter and allow to cool. Give as an enema, divided into 4 or more doses during the day. In case of need, you may dissolve quinine tablets (or quinine syrup) in this artemisia-enema (30 mg quinine base per kg bodyweight per day). Repeat this enema for seven days. As soon the patient can drink again, give all medicine by mouth.

For this age group, *Artemisia annua* can also be combined with proguanil, cotrimoxazol, Malarone, primaquin, doxycyclin or tetracyclin.

10. Children 12-13 years old (or bodyweight up to 49 kg)

You may use artemisia: Pour 800 ml of boiling water over 4g of dried artemisia leaves (or over 20 g of fresh artemisia leaves). Wait at least 15 minutes, then filter, divide into 4 cups and give one cup 4 times a day. Repeat this procedure for at least 7 days. If this treatment alone is not effective, add two and a half sulfa-pyri* tablets once, or a total dose of 1200 mg of chloroquine base divided over 3 days, or a total dose of 1200 mg of amodiaquine base divided over 3 days. Give plenty to drink (lemon grass tea, water...).

If the patient is unconscious, try the following: Pour 400 ml of boiling water over 8 g of dried or 40 g of fresh leaves, wait for at least 15 minutes, filter and allow to cool. Give as an enema, divided into 4 or more doses during the day. In case of need, you may dissolve quinine tablets (or quinine syrup) in this artemisia-enema (30 mg quinine base per kg bodyweight per day). Repeat this enema for seven days. As soon the patient can drink again, give all medicine by mouth.

For this age group, *Artemisia annua* can also be combined with proguanil, cotrimoxazol, Malarone, primaquin, doxycyclin or tetracyclin.

11. Children more than 13 years old and adults (bodyweight more than 50 kg)

You may use artemisia: Pour 1 litre of boiling water over 5 g of dried artemisia leaves (or over 25 g of fresh artemisia leaves). Wait at least 15 minutes, then filter, divide into 4 cups and give one cup 4 times a day. Repeat this procedure for at least 7 days. If this treatment alone is not effective, add 3 sulfa-pyri* tablets once, or a total dose of 1500 mg of chloroquine base divided over 3 days, or a total dose of 1500 mg of amodiaquine base divided over 3 days. Give plenty to drink (lemon grass tea, water...).

If the patient is unconscious, try the following: Pour 500 ml of boiling water over 10 g of dried or 50 g of fresh leaves, wait for at least 15 minutes, filter and allow to cool. Give as an enema, divided into 4 or more doses during the day. In case of need, you may dissolve quinine tablets (or quinine syrup) in this artemisia-enema (30 mg quinine base per kg bodyweight per day). Repeat this enema for seven days. As soon the patient can drink again, give all medicine by mouth. For this age group, *Artemisia annua* can also be combined with proguanil, cotrimoxazol, Malarone, primaquin, doxycyclin or tetracyclin.

* sulfa-pyri is short for sulfadoxin - pyrimethamine, trade name Fansidar.

Notes

- A. These recommendations are the result of our own observational studies and studies of the literature. The WHO promotes "traditional medicine", but rarely recommends specific recipes. You are, therefore, asked to seek the support of your health authority before you follow these recommendations.
- B. These recommendations are not written for tourists, but for local people and expatriates living in malaria-endemic regions.
- C. As a patient, do not hesitate to seek medical advice at any moment! As a doctor, do not hesitate to use reliable, locally available medicines! As a health-minister, recommend these treatments to your country!
- D. Please do not reprint this paper without consulting us as we are constantly improving our recommendations according to feedback from our partners.
- E. Whenever we speak of "artemisia", we mean leaves from original "*Artemisia annua*"

anamed" plants, this means they have a high medicinal content, they are fresh or have been properly dried and stored in an air-tight container.

- F. For most adults, treatment with artemisia tea alone will be enough. Sometimes, however, additional treatment will be necessary, either in the case of recrudescence, i.e. a repeat attack of malaria within 4 weeks, or if the patient shows no improvement within 24 hours from the time the treatment with artemisia tea commenced. In this latter case, of course, it is always possible that the problem is not malaria.
- G. Weighing artemisia tea: Dry artemisia leaves within 3 days at a temperature of not more than 45°C, and sieve through a mosquito grid. Weigh this powder on a scale. If you have no scale, one 35mm film container filled with dried artemisia leaves (without pressing) corresponds to 5 grams. If you grind the leaves to a fine powder and you fill the same film container with it, it gives you 10 g of artemisia! It is certainly better to make your own scales: Hang 2 plastic cups right and left from a piece of wood, as described in our book "Natural Medicine in the Tropics: IV Teachers' Resource Kit", order number 113. In the left cup, put 5 sheets of ordinary A4 photocopy paper (which weighs 80 g per square meter, i.e. 5g per sheet), in the right cup put fresh artemisia leaves. If the scale is balanced, you have 25 grams of artemisia!
- H. Preparation of "*anamed* artemisia tea": Pour one litre of boiling water over 5 g of dried or 25 g of fresh artemisia leaves, leave to draw for at least 15 minutes and filter. Prepare fresh tea every day – tea must always be used within 24 hours.
- I. Sugar in the tea: Normally we are against putting sugar in teas, because it creates dental caries. In the case of malaria, however, the malaria germs destroy the sugar in the blood. Therefore, for children up to the age of one year, you may add sugar to the artemisia tea. For older children, add honey or sugar. But only add the sugar or honey immediately before the tea is drunk, otherwise, during the day, any microbes in the tea may multiply.

- J. Honey: Normally we prefer to mix our teas with honey rather than sugar. It is, however, not recommended to give honey to babies in the first 12 months of their life. For children older than one year, it is very good to mix the dried artemisia leaves directly with honey and give it to the patient. This preparation should be freshly made every day!
- K. Preparation of "*anamed* artemisia sugar": As this medicine will be used for babies, you need to have an extremely clean product. Wash your hands before harvesting, and take leaves from the upper, cleaner part of the plant. Wash the leaves carefully and cut and dry them, ideally in a solar drier. Pound them to a fine powder using only clean instruments. (If available, you can use an electric coffee grinder). Heat sugar in a saucepan to ensure that no microbes are present and that the sugar is quite dry. As soon as the sugar is cold again, mix 10 g of the artemisia powder with 90 g of sugar. If you have no scale, this corresponds to mixing one (1) film container of fine powder of artemisia with three film containers of sugar. One level teaspoon of this preparation weighs 3 g of mixture which corresponds to 0.3 g of dried artemisia.
Expiry date: After one year – if kept in an air-tight container.
- L. Enema: Supervise the patient to ensure that the enema is not expelled. If it leaves the anus within 30 minutes, give the same amount of enema again.
- M. In some countries, chloroquine is no longer used.

Literature:

1. Hirt/Lindsey, "Natural Medicine in the Tropics: II Treatments", *anamed*, fourth edition, 2018
2. WHO/MAL/96.1075 Rev.1 (1997): "Management of Uncomplicated Malaria"
3. Pussard, Eric et al: "Dose-dependent resorption of Quinine after Intrarectal administration to children with moderate Plasmodium falciparum Malaria", Antimicrobial Agents and Chemotherapy, Nov. 2004, pp. 4422-4426



Summary: Malaria prophylaxis and treatment with *Artemisia annua anamed*

INTRODUCTION:

PLEASE HELP US regarding your order! Because of a complaint, we are no longer allowed to distribute literature PLUS teas together. Please, therefore, send us separate orders: All literature, seeds, starter kit for field cultivation, etc. can be ordered from anamed edition, Schafweide 77, 71364 Winnenden, Homepage www.anamed-edition.com. Click on "Shop", then "Order Form", or order by email: info@anamed-edition.de, or by letter.

Please order all teas (Artemisia, Moringa, Euphorbia etc) from a new initiative XYZ***. To know the name of this initiative, please write a PRIVATE email to me: anamedhnh@yahoo.de and give your postal address. (Please do not phone to avoid fraud!)

We are often asked whether visitors to the Tropics can take Artemisia tea as a prophylaxis against malaria. The answer is not simple, so please read the following carefully:

1. In this paper by "Artemisia tea" we mean the organically grown dried leaves (Folia!) of *Artemisia annua anamed* (abbreviated to A-3). This is a breed with 20 times the usual content of active ingredients. This tea must have either been bought from XYZ (see above) or grown from original A-3 seeds which have been carefully sown and the plants cared for according to our recommendations. These notes apply neither to other species of artemisia, e.g. wormwood, nor for wild forms of *Artemisia annua* which may be bought from the pharmacy or via the internet either as tea or in capsules, and nor for the whole plant (Herba!) *Artemisia annua*, which mainly consists of stems.
2. We are legally bound not to recommend any unregistered treatment as a malaria prophylaxis. In order to avoid any legal problems, therefore, we cannot recommend artemisia tea as being suitable for prophylaxis. If you do, nonetheless, take artemisia tea with you as prophylaxis, you should also take a conventional malaria treatment with you in case of emergency. If, despite your precautions, you do get malaria you must use both a full dosage of artemisia tea AND this conventional treatment.
3. The word "Prophylaxis" is often misunderstood: Even with the best prophylaxis, one may still catch malaria.
4. Scientifically speaking, because of the short half-life of about only 2 hours of what is considered to be the main active ingredient, artemisinin, artemisia tea is not thought to be effective as a prophylaxis.
5. Nonetheless, many anamed co-workers in Africa have found that when they regularly take artemisia tea, they have malaria much less frequently, if at all, and, if they do, then much less seriously than previously. Today, out of enlightened self-interest, some large firms (for example in Burundi, Cameroon and Uganda), recommend their workers to drink artemisia tea as a malaria prophylaxis.
6. Development workers, health workers or missionaries who wish to try this tea should proceed as follows: Pour one cup (200ml) of boiling water over about 1.25 g of dried *Artemisia annua anamed* (about one teaspoonful) every morning before breakfast. After at least 15 minutes, e.g. after breakfast, filter and drink this tea. The tea should be drunk all at once, and not in the course of the day. In this way the concentration of artemisinin in the blood is, for a short period of time, four times the level required to kill the malaria parasites.
7. Children should take less, according to their bodyweight.
8. Those who cannot drink this bitter tea should take the same amount of leaves, pulverise them, and every morning mix 1.25 g of this powder with some yoghurt, groundnut butter or honey.

9. Please start with this on the day of arrival, take daily whilst abroad, and continue for at least 3 weeks after returning home.
10. If you do catch malaria, take 5 g of artemisia for 7 days as described in this document. In addition, you must always carry with you a conventional medicine such as Quinine, Doxycyclin, Malarone or Fansidar. You should take this in addition to the artemisia tea. When the very first symptoms of malaria appear, you must take this medicine in addition to artemisia tea.
11. After your return home, you must carry this conventional medicine and the artemisia tea with you wherever you go. If malaria like symptoms do appear, go immediately to the nearest clinic which specialises in tropical diseases, even at the weekend. If this is not possible, take the conventional medicine and the artemisia tea and visit the tropical clinic as soon as ever possible. Inform your General Practitioner. On no account say “I have a headache, I must go to the doctor on Monday” – because by delaying you are risking your life!
12. Now calculate how much artemisia you need. For example, for 4 weeks travel: 4 weeks plus 3 weeks afterwards = 7 weeks x 7 days x 1.25 g Artemisia gives around 65 g. In case you do catch malaria, you need an additional 35 g. This gives a total of 100 g. Please therefore order 2 or better 3 packages of 50 g.
13. However please consider that wherever you are, people will ask: What are you drinking? Can I try? Do you have more for my dying child?
14. When you do order artemisia tea from XYZ, please also order this document (Order nr. 204 in English, 202 in German, 203 in French...). This provides you with all the information you could possibly need and saves you from having to ask unnecessary questions. Minimum order 20 Euro
15. In order to cause us no legal problems, we also advise you that all prophylaxis and treatment of any sort should be under proper medical supervision. We do know, however, that in rural Africa this is often impossible. Please be aware that, in a malaria area, any fever or headache could be malaria, even if the outcome of a laboratory test is negative. The overwhelming majority of those who use A-3 as a prophylaxis give us positive feedback, but there are cases where this method has not been effective. In these cases, not to treat the malaria promptly is to risk your life!
16. After you return home, please give us feedback about your positive or negative experiences with artemisia tea.
17. If the tea has helped you, please help us to help others in the Tropics in a similar way. Please give a donation to anamed international! We will advise you as to how to do this upon request.
18. In no way does this document replace advice from your doctor or tropical clinic. The priority of anamed is not so much to provide advice for visiting Europeans, but rather through Natural Medicine to offer advice on and training in the prevention and treatment of diseases in the Tropics.

If you do visit a tropical country on holiday, we encourage you to be an advocate for anamed! Talk to your hotel, the nearest church, a women’s group, a development initiative etc. and offer your help in their fight against malaria. Maybe you could take with you an artemisia starter kit, price 110 Euro, which contains 5000 artemisia seeds and all possible information about how to cultivate artemisia and how to use it to treat malaria. The kit weighs about 1½ kg.
19. If you would like to watch a short film in which Hans-Martin Hirt explains how to grow and use artemisia, see www.youtube.com/watch?v=sGTnDLOW-lE&feature=channel and www.youtube.com/watch?v=jH_eo8eT32s, or write in google: “youtube watch anamed”.

F A-3: On the subject of cancer

2022

F-1 SUMMARY

PLEASE HELP US regarding your order! Because of a complaint, we are no longer allowed to distribute literature PLUS teas together. Please, therefore, send us separate orders: All literature, seeds, starter kit for field cultivation, etc. can be ordered from anamed edition, Schafweide 77, 71364 Winnenden, Homepage www.anamed-edition.com. Click on "Shop", then "Order Form", or order by email: info@anamed-edition.de, or by letter.

Please order all teas (Artemisia, Moringa, Euphorbia etc) from a new initiative XYZ***. To know the name of this initiative, please write a PRIVATE email to me: anamedhnh@yahoo.de and give your postal address. (Please do not phone to avoid fraud!)

Dear Friends, we have prepared these general remarks because we receive so many questions regarding *Artemisia annua* anamed (A-3).



1. In this paper we mean by “Artemisia tea” the organically grown dried leaves (Folia!) of *Artemisia annua* anamed (abbreviated to A-3). This is a breed with 20 times the usual content of active ingredients as compared with wild *Artemisia annua*. Our tea comes from our organic and certified anamed-farm in Germany. This tea must have either been bought from XYZ*** or grown from original A-3 seeds which have been carefully sown, and the plants cared for according to our recommendations. These notes do not apply to other species of Artemisia, e.g. wormwood, nor for the wild type of *Artemisia annua* which may be bought from the pharmacy or via the internet either as tea or in capsules, nor for Herba (!) *Artemisia annua*, which mainly consists of stems which have no medicinal value.

2. We are astonished how many diseases and health complaints can be treated or helped with tea made from *Artemisia annua*. The pharmaceutical industry, however, has influenced the law in such a way that it is very difficult for small organisations like anamed to recommend any natural remedies legally.

3. In Germany, A-3 is not a recognised and registered medicine; for legal reasons therefore, we cannot accept any responsibility for any consequences arising from using A-3. On a trial basis and based on the recommendations of the Chinese Pharmacopoeia, anamed co-workers who are suffering from cancer have taken Artemisia tea, at their own risk, as follows:

- In the **acute phase** they drink daily one litre of A-3 tea made with 5 – 10 g of dried Artemisia leaves (depending on the severity of the disease this may be for a week or even for a period of months).
- In the **chronic phase**, they drink 1.25 g of A-3 tea daily, and this for weeks or even years.

The experience of cancer patients who use A-3 so far seems to indicate that

- a) sometimes the condition improves very dramatically,
- b) sometimes A-3 seems to have little or no effect,
- c) when taken alongside chemo or radiotherapy; the negative side effects of these therapies are sometimes not, sometimes slightly, sometimes drastically ameliorated.

4. Proposition: Make a blood and/or tumour analysis today, and then take 10 g A-3 per day for 6 weeks, (for example as powder in the morning and in the evening, each time 5 g in yoghurt or in mineral water). If you wish you can also take 10 g Moringa per day (order number 501). After 6 weeks you can make the same analysis again. If possible, your doctor should control the results on a weekly basis.

5. Please read our publication about Artemisia (Order number 204 in English, 202 in German, 203 in French...). This gives you all the information that you could possibly need about the use of Artemisia.

Please order it when you order A-3 for the first time. For those who would like more scientific information, we recommend the brochure “A-3: From Research to Experience” (only available in English, order no. 220, 15 Euro). Please order A-3 and our publications as follows: “Please send me the Artemisia document in ... (indicate the language or order number). Minimum order: 20 €.

6.. Artemisinin is contained in A-3 tea and is patented as a biological chemotherapeutic substance!!! However, it does not have any of the side effects of ordinary “chemical” chemotherapy, e.g. bone marrow depression, nausea, vomiting, mucous membrane damage, hair loss - google: patent 5,578,637!

In the internet you will find a lot more literature on the topic of “Cancer and *Artemisia annua*” or “Artemisinin and cancer”, Artemisinin and lung cancer, etc.

7. How you relate to your doctor about using A-3, whether for treatment or for prophylaxis for metastasis, is entirely up to you. You may discuss everything you do with him, you may simply inform him, or you may choose to say nothing at all. Ideally, your doctor will be interested to know the results of this method of treatment and may even recommend it. Some doctors and clinics are already working with us. We believe that the therapy with Artemisia tea, i.e. with the whole plant treatment, is effective and also makes economic sense.

8. It is important to emphasise that:

- a. A-3 is “anamedopathy”: both “alternative medicine” and “complementary medicine”! A-3 is not just a harmless decorative accessory to chemotherapy (“does no harm, doesn’t help”)
- b. A-3 can be effective as an ALTERNATIVE MEDECINE: the 20 (approx.) antitumor substances in the Artemisia plant act as “bio-chemotherapeutic agents” and are partly patented as such, but too cheaply to be of commercial interest. I therefore suggest that patients diagnosed with cancer to use, wherever possible, this bio-chemotherapy exclusively for the six weeks immediately following the diagnosis (see below), if possible with weekly doctor’s examinations, before then deciding how to proceed.
- c. A-3 can be effective as a COMPLEMENTARY MEDICINE: A-3 can strengthen the effects of radiation, reduce the side effects of “chemical chemotherapy”, and prevent the tumour cells from developing resistance against “chemical chemotherapy”.

9. We are often asked whether Artemisia tea and cytostatic drugs can be taken together. One REASON NOT TO is that the Artemisinin molecule that the tea contains causes an enzymatic increase (Cytochrome P450) which causes a faster decomposition of certain cytostatics in the liver, e.g. vinblastine, vincristine, irinotecan, paclitaxel, docetaxel, busulphan, etoposide, and tenoposide and possibly methotrexate. It is therefore possibly better in such cases, not to use Artemisia tea with the cytostatic therapy.

One REASON TO combine both is that the Artemisia side effect (enzyme-induction) is inhibited through the taking of Moringa powder (more on this issue see (1) below). Moreover, it is also well-known that sometimes Artemisinin inhibits the resistance of cancer cells against cytostatic drugs.

CONCLUSION: It is therefore reasonable to discuss this issue with your doctor. Personally, I would be thankful if the two therapies could be done separately, then one can better assess the successes and failures of each therapy.

10. We are very actively collecting and compiling the experiences of cancer patients who are using A-3. This data will help us to considerably improve our understanding and our recommendations. Please, therefore, help us by sharing your experiences with A-3 – whether A-3 helped a lot, a little or not at all. If you can give us the results of laboratory tests, even better! You will receive a questionnaire with the Artemisia order.

11. Costs: ask your health insurance company, whether they can reimburse you for “complementary medicine” or “medicines from traditional Chinese medicines”. If so, get a private prescription for Artemisia/Moringa and submit the private prescription along with the XYZ*** invoice and your bank transfer receipt, to your health insurance company (after you have paid our invoice).

12. You will have learnt from our Home Page that our primary concern is not the promotion of Natural Medicine in Europe, but in developing countries. If Artemisia has indeed helped you, please help

children survive from hunger and diseases by supporting our anamed groups (see www.anamed.org) in those countries with a donation for:

anamed international e.V., Schafweide 77, 71364 Winnenden, Germany. IBAN: DE12 6025 0010 0007 2190 69. Bank: Kreissparkasse Waiblingen, Alter Postplatz 8, 71332 Waiblingen, Germany, Swift/BIC: SOLADES1WBN; for donations of 50 Euro or more you will receive a donation receipt. Please therefore give us your full address. Please note that this account is **only for donations**, not for orders.

Hans-Martin Hirt

F-2 DOSAGE

How should I take artemisia?

- **High dose:** Pour 1 litre of boiling water over 5 g of dried tea (or five times the weight of fresh leaves), leave to draw for at least 15 minutes and drink in portions during the day. 5 g of dried and sieved leaves correspond to about 4 rounded teaspoonfuls. Alternatively, powder this same amount very finely, or buy as powder, and twice daily mix 2.5g A-3 powder in warm tomato juice or for example in yoghurt, cream, honey or apple sauce. This is also 5g A-3 per day. Take immediately. Many patients can take 10g or even 20g each day without any problem.
- **Low dose:** Before breakfast, pour at least 200 ml of boiling water (1 large cup) over 1.25 g of dried leaves (or 6.5 g of fresh leaves). Then drink this tea after breakfast. 1.25 g of dried and sieved leaves correspond to one rounded teaspoonful. Alternatively, powder this same amount very finely, or buy as powder, and mix 1.25g A-3 powder in warm tomato juice or for example in yoghurt, cream, honey or apple sauce. Take with your breakfast.

A word of caution if you eat artemisia leaves or moringa leaves not as tea but directly during your cytostatics therapy: Always first pour boiling water over the powder to destroy the microbes on the leaves! Cytostatics damage the white blood cells to the extent that even small quantities of natural microbes from the leaves may cause diarrhoea or other complaints. XYZ*** products are never radiated to disinfect the leaves; you must therefore boil the leaves or pour boiling water over them.

Bitter taste? In foods that contain fats the bitter taste of artemisia disappears.

How to proceed – a suggestion:

Have a blood test today and, if possible, have it tested for tumour markers. For 6 weeks take ONLY A-3 (between 5g and 20g /day, plus 5g moringa per day), in short, “A-3/M”. Then have another blood test, including for tumour markers.

- if there is no improvement, and no improvement in your general well-being: Stop the A-3/M therapy.
- if the improvement is small but insufficient: Continue as before but with 10 g A-3 each day. Or continue with A-3/M but combine it with iron tablets (in total, 100 mg Fe++ per day). Again, continue this treatment for 6 weeks, preferably in collaboration with your doctor or pharmacist.
- If the improvement is significant: Continue the A-3/M therapy for several weeks or even months. If your health remains good, gradually reduce the dosage to 1.25g A-3 per day. Otherwise stick to the higher dosage. Make sure that you always have a good, balanced diet. You certainly don't need any of the so-called superfoods!

Moringa: Stir moringa leaf powder into hot coffee, tea or soup and drink everything. People with sensitive stomachs may experience nausea, a higher temperature or diarrhoea because of the ingredients of Moringa, or the bitter nature of artemisia. These side effects are usually short-lived. In such a case, stop this therapy until your system has returned to normal.

Example: For therapy a (see above) take on

Day 1: 1g A-3 as powder or tea
 Day 2: 2g A-3 as powder or tea
 Day 3: 4g A-3 as powder or tea
 Day 4: 6g A-3 as powder or tea
 Day 5: 8g A-3 as powder or tea
 Day 6: 10g A-3 as powder or tea
 Day 7: 10g A-3 as powder or tea plus 1 g moringa leaf powder
 Day 8: 10g A-3 as powder or tea plus 2 g moringa leaf powder
 Day 9: 10g A-3 as powder or tea plus 3 g moringa leaf powder
 Day 10: 10g A-3 as powder or tea plus 4 g moringa leaf powder
 Day 11: 10g A-3 as powder or tea plus 5 g moringa leaf powder
 If you again have side effects, reduce the dose to a tolerable level.



F-3 Suggestions for treatment

In the light of my experience in the cancer research centre, and after studying the literature and receiving a lot of feedback, I have selected typical situations for which I make some specific suggestions. I do not necessarily claim that they are the best. (I am entitled to give these suggestions in my name – it is not the arrogance of someone who is not an oncologist!).

Always follow the recommendations of your doctor or therapist, and always eat a healthy diet – you don't need any so-called superfoods!

Help the patient in all possible ways. The book „Natural Medicine in the Tropics I“, order number 105, gives many tips about how symptoms may also be treated.

---Therapy “Hirt 1”: Very acute cases

At 7 o'clock, before breakfast, take one iron tablet (containing 50 mg Fe⁺⁺) and also 5, or better, 10 g, moringa leaf powder.

After breakfast, at 7.30: Once again take the same iron tablet, provided you have no negative reaction to iron tablets.

12 noon: Artemisia as powder or tea: 5 g

18 o'clock: Artemisia as powder or tea: 5 g

---Therapy “Hirt 2”: Acute cases:

At breakfast: Artemisia as powder or tea: 5 g

At lunch: 1 heaped teaspoonful of moringa leaf powder (5g), E.g. stir into hot soup or gravy and eat with the meal.

At evening meal: Artemisia as powder or tea: 5 g

After 6 weeks: A good recovery? Continue with „Hirt 2“. Slight improvement? Change to „Hirt 1“. No improvement at all? Change to “Hirt 9, 6 or 8”.

---Therapy “Hirt 3”: Cancer that is not life threatening:

You have perhaps already realised that you have a tumour, but it is not life threatening: Have a blood test today, also for tumour markers. For 6 weeks take only A-3, and possibly also moringa.

At breakfast: Artemisia as powder or tea: 2.5g

At lunch: 1 heaped teaspoonful of moringa leaf powder (5g), E.g. stir into hot soup or gravy and eat with the meal

At evening meal: Artemisia as powder or tea: 2.5g

Then have another blood test and check for tumour markers.

---Therapy “Hirt 4”: Aim to prevent metastases over several months

Every day take 1.25 g artemisia as powder or tea at breakfast and moringa now and then as you wish.

---Therapy “Hirt 5”: (Combination): You have possibly realised that you have a tumour and without taking cytostatics your life is in danger. But be careful: Maybe the proposed chemotherapy reduces the tumour, this is fine. But does it also improve the quality of your life??? Does it improve your life expectancy??? If that is the case, then go ahead with chemotherapy and then, after each injection, wait 3 days and then take therapy “Hirt 2” as described above until the day before the next injection. That means, always take “Hirt 2” between the chemotherapy injections.

---Therapy “Hirt 6”: (Combination): You have realised that you have a tumour and without taking cytostatics your life is in danger, but you refuse to take chemotherapy: Follow “Hirt” 1 or 2” and combine with herbal treatments recommended by your doctor or therapist.

---Therapy “Hirt 7”: Resistance: You have already had chemotherapy, but the tumour has become resistant to the treatment. Follow “Hirt 1, 2 or 8”.

---Therapy “Hirt 8”: Resistance: Take a different chemotherapy, but at the same time follow Hirt 2 therapy, in order to reduce the development of resistance. “Chemo-combination-therapy” means that one takes two cytostatics at the same time, in this case tea that contains artemisinin together with a conventional pharmaceutical. Please note: A conventional cytostatic treatment always weakens the immune system. If you take artemisia or moringa during such a treatment, always pour boiling water over the powder, because herbal products are never subject to radiation and are therefore not sterile.

---Therapy “Hirt 9”: Resistance: If neither therapy “Hirt 1” or “Hirt 2” has any effect. Artemisia tea fights the tumour with oxidative stress. Seek advice about an “anti-oxidative stress” natural therapy from a medical herbalist. (You may also google anti-oxidative medicinal plants, but please don’t ask me!)

---Therapy “Hirt 10” The doctor says: “We have tried every possible treatment, leave the patient at home to die in peace.” My response is, **No!** The doctor means to say that there is nothing more he can try from the irresponsibly small range of (chemical) treatments provided by the pharmaceutical industry. He knows little about the wide range of medicinal plants, some of which have been well researched, some not yet. But anyway, because of the influence of the pharmaceutical industry, even if he knows about them, he is not allowed to recommend them. Put your future in God’s and your own hand! On several occasions we have seen inexplicable but wonderful recoveries. It is also true, of course, that one day we will all die; artemisia is not a key to eternal life!

---Therapy “Hirt 11” “Nothing works anymore”: Give the best possible palliative care to make the last days as comfortable as possible. Treat the patient with pain killers, cannabis (don’t ask me about that!), artemisia tea etc.

F-4 Possible additional substances: Iron? *Moringa oleifera*? *Euphorbia hirta*?

What role does iron play? A fast-growing tumour tries to absorb as much iron as possible from its host in order to promote that fast growth. For this reason, many cancer patients look very anaemic. Artemisinin does not automatically seek out cancer cells, but rather searches for body cells that have a high content of (inorganic) iron; a common feature of cancer cells and malaria parasites.

There are two possibilities:

1. The tumour is not affected by artemisinin. In this case giving more iron would be a mistake, as it would encourage the tumour to grow even more rapidly.
2. The tumour responds to treatment with artemisinin. In this case taking iron tablets, for example in the morning, would be helpful, because the tumour cells would be more immediately identified by the artemisinin and destroyed.

Summary: Taking iron tablets is only advised when the patient is regularly medically examined and advised, ideally every week. Otherwise include iron-rich foods such as spinach or moringa into your daily diet.

MORINGA:

Moringa may be ordered from XYZ***. Moringa, however, can be purchased from many sources listed in the internet. Take great care that you only buy good quality moringa. Unscrupulous suppliers, particularly from abroad, may pack powdered moringa into capsules that is dirty or even contains mould. With many patients, particularly at first, moringa can cause diarrhoea. For this reason, it is advisable at first only to take artemisia, and then, when the body has become used to artemisia, to also take moringa. In our experience moringa is most valuable with patients whose general health is at a low level, for example who are undernourished, are anaemic or are desperate.

Euphorbia hirta

Tumours of the liver, digestion system or genitals which do not respond to therapy may alternatively, or additionally to the A-3 therapy, respond to treatment with *Euphorbia hirta*. We suggest: 2g of dried *Euphorbia hirta* per day for 15 days. That is, a total consumption of 30g. *Euphorbia hirta* may also be purchased from XYZ***. For independent comments, google cancer *Euphorbia hirta*. *E. hirta* acts against germs that may promote cancer, for example amoeba and trichomonas.

The traditional preparation:

Mix 2 level teaspoonfuls (= 2 g) of *E. hirta* with 1 litre of water. Bring to the boil and leave to draw for at least 30 minutes. Now sieve and drink 250 ml 4 times a day. *E. hirta* must be taken as tea and not as dried powder. We do not know whether *E. hirta* alone would reduce tumours, although this is claimed in the internet. *E. hirta* is described in much more detail in the anamed publication “Natural Medicine in the Tropics: Foundation Text”, order number 105 from www.anamed-edition.com.

F-5: Drug Interactions

a.) Let me define the terms: “**Chemotherapeutics**” are chemical substances (which may even come from a natural source), which selectively harm body cells or microorganisms. Drinking mint or camomile tea may be described as chemotherapy, because these teas attack, for example, the flu virus! Artemisinin as a component of artemisia tea is patented as a chemotherapy! There are literally hundreds of chemotherapies (e.g. hormones, protease inhibitors, antibodies, therapies to strengthen the immune system). It is therefore absolutely impossible to judge whether one can combine any given therapy with A-3 tea. I would usually tend to answer the question positively.

b.) “**Cytostatics**” can also be classified as chemotherapies. These inhibit cell growth. Cytostatics are usually toxic to cells, with the result that, for example, you lose your hair. May these be combined with A-3 tea?

---The case against: The artemisinin molecule leads to an increase in the enzyme cytochrome P450. This enzyme increases the rate at which cytostatics are destroyed in the liver.

---The case for: It is known that this side effect of artemisinin (enzyme production) is reduced by taking moringa leaf powder, for more information, see below (1). Further, it is known that with artemisinin the cancer cells are less likely to develop resistance to cytostatics. Many patients have fewer problems when taking cytostatics when they also take artemisia tea.

c.) SUMMARY: I recommend not to take cytostatics and artemisia tea at the same time: Take artemisia tea in the intervals between taking cytostatics (E.g. 1 week cytostatics, 3 weeks artemisia tea, and so on). In any case, also ask the advice of your herbalist / medical advisor.

Personally, I am grateful when both therapies are taken separately, because then it is much easier to judge the success, or lack of success, of the one therapy or the other.

d.) We are often asked whether artemisia tea may be taken together with food supplements, additional minerals or vitamins and suchlike. Ask your therapists! We recommend having a healthy lifestyle and good, balanced diet, and otherwise not to combine other substances with artemisia tea. After 6 weeks you can then judge for yourself what works and what does not work.

(1): Moringa: Significant CYP3A4 inhibitory effects were found, with IC50 values of 0.5 and 2.5 mg/ml for leaf-methanol and leaf-water extracts, respectively “J Infect Dev Ctries. 2008 Oct 1;2(5):379-83.:Moringa oleifera leaf extracts inhibit 6beta-hydroxylation of testosterone by CYP3A4. Monera TG, Wolfe AR, Maponga CC, Benet LZ, Guglielmo J.:www.ncbi.nlm.nih.gov/pubmed/19745507

(2) Notes on this long-term therapy: the assumption made here is that ideally all 20 antitumour compounds in Artemisia tea / powder have an uninterrupted effect on the tumour to slow its growth.

(3) In Germany this medicine is for example Ferrosanol®, one tablet contains 50 mg Fe++ Iron.

F-6 CANCER: answers to some frequently asked questions:

F-6-1 Tea leaves or tea powder?

Answer: if you order A-3 tea from XYZ***, it is sent to you as “broken” leaves, similar to how you may be used to seeing open peppermint tea. The advantage is: you will be able to see the high quality yourselves: not too many (ineffectual) stems, no (allergenic) blossoms, no discoloured leaves. You can prepare tea with them. However, if you prefer A-3 tea powder, you can either pulverise these tea leaves by hand (with a teaspoon in a cup) or pound them in a mortar or grind them even finer using an ordinary electric coffee (cutter) grinder. It is cheaper for you to do this yourself. If not, XYZ*** does it for you for an additional fee. You can swallow this A-3 powder straight instead of preparing it as tea. In that case, stir it into some yoghurt, peanut butter or banana.

F-6-2 What is the approximate ratio of volume to weight?

a. Answer: Artemisia tea leaves (“broken”):

1 level teaspoon = 0.4 grams

1 slightly heaped teaspoon = 1.25 grams

1 very heaped teaspoon = 1.5 grams

b. Answer: Artemisia tea leaves as powder:

1 level teaspoon = 0.6 grams

1 slightly heaped teaspoon = 2.0 grams

1 very heaped teaspoon = 3.0 grams

c. Answer: Moringa powder:

1 level teaspoon = 1.0 gram

1 slightly heaped teaspoon = 3.0 grams

1 very heaped teaspoon = 5.0 grams



F-6-3: What should I do? Next week I shall have radiation therapy / undergo an operation / be treated with cytostatics.

No panic!! On average the tumour will already be 10 years old, even before it was diagnosed. If the situation is not life threatening, and your doctor is honest, he/she will agree that you try a therapy with medicinal plants for 6 weeks.

F-6-4: Artemisia is just too bitter – what can I do?

If artemisia tea is just too bitter, then there are several possibilities:

- Pulverise the leaf tea, either by hand or in a coffee mill.

- Buy already powdered tea from XYZ*** (order no. A-3 G50 or A-3 G500).

Mix this powder with 3-4 teaspoonfuls of cream and wash it down with plenty water. It is almost tasteless! Alternatively take the same amount of milk, or mix the artemisia powder with honey, butter or margarine, or hide it in a banana or peanut butter, or in a cup of hot coffee – you can try almost anything!

Buying artemisia or moringa in capsules is very expensive. Such products are 4 - 10 times more expensive, and also the dose is too low for tumours. XYZ*** does not supply capsules. Remember that

you can rarely verify the quality of herbal medicine that you buy in capsules. You may, however, put powdered artemisia or moringa from XYZ*** in capsules yourself. This process is simple and cheap, see for example <https://capsuleconnection.com/capsule-machine/>. Empty capsules can be bought in most pharmacies, or online. But note that the empty capsules cost more than the herbal powder in them! With great care, one can press 450 mg Artemisia annua anamed powder into capsules of size "0" (the usual size for capsules). For a daily dose of 5 g one requires 11 capsules! We are often asked how much active ingredient there is in one capsule. The answer is: 4.5mg artemisinin plus at least 4.5mg artemisinin-equivalent substances. With 9mg per capsule one can say that if one takes 11 capsules that one is taking 9x11, say 100mg artemisinin (equivalent) per day.

F-6-5: Long-term or short-term therapy? This question is often asked, as various publications suggest the latter.

“Recent information has come to light that indicates that the intestine builds up resistance to absorbing oral artemisinin compounds very quickly, within several days. Resistance is demonstrated by a drop to >30% of the original rate of absorption. Research indicates that this resistance can be overcome very quickly by discontinuing use of the artemisinin compounds for several days to a week; when resumed, their absorption will be at the previous higher level”. (Ashton, et al., Artemisinin pharmacokinetics is time-dependent during repeated oral administration in healthy male adults, Drug Metabolism and Disposition 26 {1998} 25-27.)

Answer: I leave the decision with you. Studies with mice have shown that when mice with cancer are treated with artemisinin (always Monday to Friday), the tumour cells reduce in size from Monday to Friday, and then grow again over the weekend. For this reason, I recommend continuous use. I prefer long-term therapy. I believe that all 20 anti-tumour components that are found in artemisia tea or powder inhibit the growth of the tumour best if taken continuously. After taking this therapy for 6 weeks, one may take a break in order to judge whether it is necessary to continue the therapy.

F-6-6: The question of cost

Being contemptuous of nature leads to an impoverishment of mankind! One injection bottle of 60mg of isolated artemisinin in German pharmacies costs about 195 Euro!!! After taking 6 g of Artemisia annua as tea, you have this same amount, 60 mg, of artemisinin in your blood. 6 g A-3 Tea cost about 2 Euro if bought from XYZ*** and practically nothing if you grow it yourself.

Artemisia annua and Moringa are used in traditional Chinese medicine. Many health insurance schemes do understand that the sensible use of herbal therapies can save millions. Maybe you could ask your health insurance scheme to pay you what you are saving them!

F-6-7 Further questions regarding treatment with A-3

- a.) “What is the children’s dose?”: Please calculate 1/5 of the adult dose for each 10-kilogram body weight.
- b.) “Someone said that Artemisia annua only becomes available to the body in fat or oil, and so one should always take a small spoon of oil after drinking the tea?”. Answer: Yoghurt or something similar does the job adequately. Oil is unnecessary. Artemisinin is released thanks to the saponins (which are a sort of herbal soap) in the leaves and the emulsifier cholesterol, which is produced in your own gall bladder!
- c.) “Is A-3 always effective?” Answer: A-3 tea or powder is like a bunch of 20 keys (anti-tumour substances). No-one can know whether any of them can open the lock (i.e. heal the cancer).
- d.) “Can one take artemisia powder with other substances?” Answer: Perhaps, but one can never know how the 245 different components in the artemisia plant may interact. When the cancer is serious, please ONLY take A-3 and possibly moringa, and observe over 6 weeks whether progress has been made.
- e.) “I am six weeks pregnant. May I drink artemisia tea while I am pregnant?” Answer: For information, no pharmaceutical firm will unreservedly recommend any medicine during early pregnancy. This also applies even for medicinal teas; if their use is not absolutely necessary to heal the illness, then do not use during the first 3 months of pregnancy. Our (and the WHO’s) experience so far, however, seems to suggest that taking artemisia tea is without side effects and causes no damage to the foetus.

F-7 Personal remarks on Cancer and A-3

A conversation with Dr. pharm. Hans-Martin Hirt

Q: Dr Hirt, from 1976 to 1979 you worked at the German Cancer Research Institute in Heidelberg. What did you learn there?

That the first and most important medicine is already in the body. I saw that when a tumour occurs the body produces a natural defence substance (Interferon) which can destroy both cancer cells and microorganisms.

Q: What would your recommendation be to students and universities?

To conduct research quite independently from industry. It is better that a professor has two PhD students financed from the state who conduct honest research rather than 20 such students financed by industry who are required to continue their research for just as long as it takes to achieve the desired results.

Q: What does conventional research leave for posterity?

Any amount of radioactive substances, for which there is no safe means of storage. That has always angered me, and still does. There are so many possible topics for postgraduate research which would cause absolutely no environmental problems (e.g. evaluations of traditional medicine). But it seems that, to be worth anything, the work has to involve radioactive substances. The more radioactive signs there are in an institute, the greater the reputation of the professor!

Q: Today you are primarily interested in healing plants. Why did you not do research into them in 1976?

That is what I wanted to do. But the Head of the institute explained that the entire world of plants had already been thoroughly investigated, and there was nothing new to be discovered! What a ridiculous answer ... and, worse still, the modern cancer research institutes seem to be still of this opinion. Isolated substances are researched, because these can be patented. Whole plant extracts are absolutely of no interest because they cannot be patented and are therefore not such that anything new can be invented.

Q: But what about Professor Efferth from the German Cancer Research Institute who conducts research into artesunate?

*That is true, but now he works at the University of Mainz, and nobody at the institute is continuing his research, although it is so important. Artesunate, which is a soluble form of artemisinin which is extracted from the plant *Artemisia annua*, is an excellent medicine with no unpleasant side effects. In my opinion, there should be no cancer patients today who are not prescribed artesunate, either alone or in combination with another therapy.*

Q: Artesunate, is it already patented?

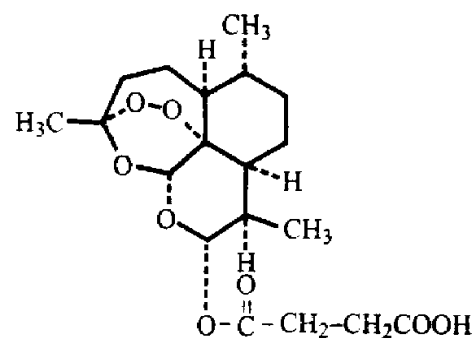
Sure, since 1996, by Dr Lai and Dr Singh from Washington DC. Even so, artesunate is still not a part of conventional cancer treatment. The reason is quite straight forward, as Dr Singh has himself told us "artesunate is so cheap that no pharmaceutical company is prepared to pay for the clinical trials". The drug firms have no interest in replacing their expensive Zytostatika with cheap phytochemicals! In the meantime, it is now possible to buy expensive but dubious artesunate capsules for self-treatment, but this is certainly not a reliable alternative.

Q: How did you discover this plant?

*Quite simple, via malaria! *Artemisia annua* has been used in Asian medicine for the treatment of fever and malaria for 2000 years. In the 90s artemisinin was extracted from this plant. It is an excellent treatment for malaria. Industry considers the other 244 components of this plant to be impurities and simply throws them away! The wild form of this plant does not grow in the Tropics, but in 1996 we had the good fortune to gain access to a breed that will grow in the Tropics. This we call *Artemisia annua* anamed or A-3.*

Q: And is the tea that you make from the leaves just as effective in treating malaria as the artesunate?

Absolutely, if not better! Especially when one drinks the tea for 7 days or longer. And that is true not only for malaria. AIDS symptoms are also alleviated. Many AIDS patients in Africa, Europe and Asia



report that their immune system is significantly stronger with artemisia tea. We have known this for a long time.

Q: So how did you latch on to cancer?

It was not we ourselves but our co-workers in over 1000 artemisia projects in 75 countries. Cancer and AIDS often occur together. AIDS patients sometimes suffer a form of skin cancer called Kaposi's Sarcoma, which responds well to artemisia tea. In addition, some doctor friends of anamed have also tried the tea out with other forms of cancer.

Q: And does it always help?

That is never the case. In that were true we would not need to worry about staying healthy, because there would always be a harmless medicine to put us right again! Sometimes artemisia tea does not help at all, sometimes it helps a little and sometimes it is remarkably effective.

Q: Can it do any harm?

Why not? We have observed that with 3 leukaemia patients, and that is understandable. With AIDS patients we have observed that the tea has stimulated the production of a particular sort of white blood cells (called T helper cells). If such cells have leukaemia, then of course the disease will get worse. But on the other hand, we have also seen leukaemia patients whose condition improved with the tea. In these cases, the leukaemia was most probably a defect in another strain of leucocytes.

Q: Is it not dangerous to recommend a simple tea for such a serious illness?

You are right of course if you believe the widely held view regarding teas; that is that "teas have no benefits but also do no harm, and therefore one can drink them at will". That is utter nonsense. If you were to drink a tea now made from a poisonous plant, you would no longer be with us by this evening. We recommend A-3 tea because it is affordable. In Germany 50g cost 12 Euro. In the internet one can buy artemisia capsules, but in those the leaves have been ground together with the (useless) stems; bought this way the same amount of leaves costs about 600 Euro! If, however, 12 Euro is still too expensive, the plant can be grown in one's own garden.

Q: Is this tea available in the pharmacy?

No. The "Artemisia annua tea" that you can buy consists of the shredded wild form of the plant and is about 80% stems ("Herba Artemisiae annuae"). In contrast, we very carefully harvest only the leaves from an artemisinin rich culture ("Folia Artemisiae annuae, subspecies anamed"), in short A-3.

Q: Could you help us to obtain some artesunate?

No, it is not our job to smuggle drugs out of Belgium that one can only buy here on prescription! But we also believe that artemisia tea is better. According to the information given on the database of the famous ethnobotanist James Duke, the plant contains a total of 20 active ingredients with anti-tumour properties. This mixture of weapons makes it virtually impossible for the tumour to develop resistance, e.g. against artemisinin.

Q: Could you explain the mechanism by which artemisinin destroys tumours?

Artesunate, or with tea the dissolved artemisinin, works in several ways. Compared with normal cells tumour cells have a high iron content. The artemisinin molecule contains a peroxide bridge. In contact with the iron this bridge breaks open and the oxygen reacts violently with the iron to form free radicals which combine with and paralyse the cancer cells, which then simply die.

Q. And the other ways in which artemisinin works?

Artemisinin, and I believe particularly our artemisia tea, leads to a significant strengthening in the immune system. We have seen this very dramatically with AIDS patients. A tumour is a foreign body a bit like an embryo in the womb. A pregnant woman quite naturally has a lower immunity, so that the embryo is not rejected. In the same way the tumour reduces the immune system of its host, in order not to be rejected. If the immune system is strengthened once again, it must be possible for the body to fight the tumour and destroy it. Artemisinin is in fact an immunomodulator – it brings the immune system back into balance, sometimes strengthening it, sometimes weakening it. Artemisia tea contains other immune-stimulants, viz. astralgin, coumarin and eupatorin. Our extensive experience shows that AIDS patients enjoy an even greater strengthening of their immune system when they also take moringa leaf powder.

Q: Does the cancer then disappear?

We have experience with about 50 dogs whose tumours did not become smaller but became benign. This effect is known to be because artemisinin prevents the production of new blood vessels which normally grow into the cancerous growth to feed it. This is known as the prevention of angiogenesis, the prevention of the formation of blood vessels. Thus, we can say that the cancer has been choked and starts sleeping! So that the treatment proceeds steadily, it is advisable to take the A-3 tea regularly in manageable amounts over a long period, and not to interrupt the treatment.

Q: And what about during chemotherapy?

Even there I recommend taking artemisia tea. Why? Cancer cells are intelligent! During chemotherapy they develop mechanisms whereby they throw the cytotoxins out of the cells again – they become resistant! Artemisinin prevents this happening, and the tumour cells die.

Q: During radiotherapy?

There too I recommend taking artemisia tea. Why? With artemisinin many tumour cells become much more sensitive to radiation. With normal cells it has virtually no effect (according to research at the University of Tübingen). Say to your oncologist or radiotherapist therefore that you intend to take artemisia tea at the same time, and that therefore, on a trial basis, he can reduce the amount of radiation, or even do away with it altogether!

Q: What should I do now, if I find that I have a tumour?

First, remain calm. Secondly, find a doctor who is interested in healing plants, or who already has some experience with A-3. Thirdly, lead a healthy life, take exercise for at least an hour a day in the fresh air, eat organic food, do not smoke, take little or no alcohol, avoid any source of stress. Fourthly, Drink A-3 tea, or the same dosage of leaves mixed in yoghurt as described in our publications, depending on the severity of the disease 5 or 10 grams per day. Fifthly, if there is no emergency, be patient. An unnecessary biopsy, for example from a dormant prostate cancer, can in itself lead to metastases. After 4 weeks have laboratory tests done. Does the blood look better? Has the tumour stopped growing, or is it growing more slowly? Have the tumour markers reduced? If the answer to all these questions is “no”, then the A-3 tea on its own is probably useless; in this case I would recommend trying iron and A-3 tea together, or A-3 tea and moringa. If even that produces no results, then you must begin conventional therapy, but continue to take artemisia tea and, with particularly weak or fearful patients also moringa powder. Whenever possible do all this in cooperation with your doctor.

Further literature: see homepage.

XYZ*** . To know the name of this initiative, please write a PRIVATE email to me: anamedhnh@yahoo.de and add your clear postal address. (Please do not phone to avoid fraud!)



G A-3 and other diseases

G-1: corona

Before fighting an enemy, I should know his name, his offense, my approach - and all of that should have the same name. Example: I fight against the flu virus, that causes the flu, with antigrippal medicine, everyone can remember that – that's the first step to health. Now politicians and virologists have been arguing with the Corona virus for so long that nobody can see through it and everyone is only afraid of the unknown enemy with countless names.

My suggestion - and I stick to it: there are only 2 viruses, and they are variants of one and the same type of virus.

The first I call Covid-1 virus, which led to the Covid-1 pandemic with hundreds of deaths in 2002/2003. The second I call the Covid-2 virus, which led to the beginning of the current Covid-2 pandemic in 2019, with estimated millions of deaths.

I fight both viruses with "anticovalid" drugs - either chemically or biologically - Chemistry offers nothing, biology does. A study (1) in 2005 already examined anticovalid plants from traditional Chinese medicine, four of 200 plants were promising, and only one of them is easy to propagate: *Artemisia annua*. In this study, freely available on the Internet, photos are shown of how *Artemisia annua* enables cell growth of lung cells in a test tube, even under COVID infection. Our association has been working with this plant for 24 years and has often sent the tea and seeds free of charge to countless developing countries around the world. Sometimes the diseases went - e.g. in malaria (just as deadly) - so that clinics in Africa had to close due to a lack of patients. We have also been receiving echoes from patients about protecting the lungs from bronchitis for many years.

Initial observations in Covid patients look good. Result? The EU Commission, the World Health Organization and the German government are doing everything possible to prevent our work and accuse us. And nothing is tested, so that you can say that it has not been tested by us Germans. Logical, isn't it??? Could everyone come and screw up the profits of the vaccine industry. Would it be a shame to find normalcy again??? Please people, don't believe anyone, not even me, have your own positive / negative experiences and definitely share them with the population, thank you! Nature has thousands of viruses "in stock", but also thousands of medicinal plants. It is up to us to discover them! In China, medicinal plants are used in first aid, in the West they have been forgotten too much. Infections in the West (and in Euro-centered developing countries) continue to increase, and the pandemic is expected to continue to bother us for another 2 years! Suggestion: Let us give all those responsible a Catholic Bible, in the book Sirach, 38.4 it says: "The Lord grows the medicine from the earth, and a sensible person does not despise it." Whoever cultivates our *Artemisia* becomes the "boss of a pharmaceutical company" because the plant produces 245 active ingredients - completely free of charge. The home-grown tea contains, for example, artemisinin, which is patented as a remedy for Lyme disease, tumor and AIDS. The South African state recognized this tea, which we helped develop, in 2008 as an effective medicine and approved it for the following indications: "Malaria, immune deficiency, fever, acute diarrhea, hemorrhoids, intestinal and blood parasites". Today, given the reports in the literature, one would have to add "corona infections". Then, I say, we would need much less ventilators and protective clothing.

1968: How history repeats itself: In the Vietnam War, malaria-stricken American soldiers fight against malaria-stricken soldiers from Vietnam and China. To prevent malaria, the Americans opted for chemistry, but the Communists began using biology in 1968: They chew the leaves of the *Artemisia annua* plant thanks to the rediscovery by the Chinese woman Tu Youyou. Biology had accomplished something that chemistry was not capable of: ending a war. But health policy took 47 (!) Years to think before she awarded the Nobel Prize to Ms. Tu Youyou in 2015!

2020: The "war" of the corona virus against humanity shakes the world. Research on prevention is left to the vaccine industry, research on therapy for a sinfully expensive pharmaceutical and chemical industry. BUT: Biology will win again this time, only we have to give Western health policy a 47-year reflection period, as long as we have to close schools and shops. So what? There is a saying: "There is an herb against every disease." Although it's superficial, it has a true core. In the course of evolution / creation, plants had to assert themselves in order to defend their survival for millions of years. They set

up highly complex defense mechanisms and therapeutic principles, for example to assert themselves against viruses.

The task of mankind is only to find these plants. Our search and research however, is blocked by the influence of the pharmaceutical lobby, as we are experiencing now. The association anamed has so far specialized in the malaria plant *Artemisia annua* and saved the lives of thousands worldwide *. It now appears that the malaria parasite and the corona virus have a common weak point, which is why antimalarial tablets are now used in Germany and France for the prophylaxis and therapy of corona infection. But of course, under pressure from the pharmaceutical lobby, only industrial preparations. Those responsible apparently do not care that *Artemisia annua* ingredients work against herpes virus, cytomegalovirus, papillomavirus and in a new study also against coronavirus (see below).

Our *Artemia* plant "A-3" is not tested, so that you can say that it has not been tested! If risk groups were to drink a cup of A-3 tea daily, I would estimate that only 10% of today's patients would need intensive care. The need for ventilators and protective clothing could easily be met for the remaining patients. I have been researching virology and immunology at the German Cancer Research Center for over two years; The EU, WHO and the federal government deliberately refrain from my non-industrial advice. *Artemisia annua* defends itself against viruses with a cocktail of antiviral substances. BUT: The federal government as well as the EU prefer to rely on expensive, patentable individual substances from industry ... and lo and behold, the virus is faster again, mutated, and convalescents (like malaria with industrial single-substance preparations) are again the closest Coronavirus sick. Let us take action ourselves: "If God helps you, he will lean on your shoulder" ... (Africa)

---**Studies from 2005 in China** show how *Artemisia* protects the lung cells! "In summary it can be said that the ... compounds extracted from *Artemisia annua* ... show antiviral activity against SARS-CoV infections ... The results of our study provide strong support for the use of these herbs for the treatment of SARS-CoV infectious diseases "

---more studies you receive if you write, e.g. in google: "*Artemisia annua* Corona" or "Artemisinin Covid" or "*Artemisia* Covid" and so on..

WHAT CAN I DO?

A. Corona prophylaxis? Lots of exercise in the fresh air, good immunity, drinking a cup of *Artemisia* tea in the morning. Keep the bronchi free by chewing sage leaves from the pharmacy or eucalyptus leaves from the named Initiative of Winnenden. It is not important to remain corona negative, but to go through the transition to the corona positive state very gently!

B. Corona therapy? Even the best clinic has neither a vaccine, nor an antiviral medicine. You will find the second in your own kitchen cupboard rather than in the clinic: garlic, onions, leeks, chives, wild garlic. Furthermore, yogurt and foods that contain vitamins C and D. Drink a lot! Continue inhalation against bronchitis and cough (dissolve a pinch of salt in a cup, add eucalyptus oil, Japanese medicinal plant oil or peppermint oil). Suggestion: additionally use A-3 tea or 5g powder per day. Use eucalyptus or sage as described above, do everything so that you do not have to occupy the rare clinic places. "One apple a day keeps the doctor away"? Would be nice. Please keep in mind that every plant, like every tablet, can have side effects. (An antihypertensive drug can save the life of a patient with high blood pressure, but it could kill a person with low blood pressure). So: In the event of serious illnesses, involve a good doctor / alternative practitioner if possible.

In a free video, we explain step by step how to get from the seed to the finished medicinal plant tea: Please search for: "YouTube anamed cultivation and harvest of *Artemisia annua*" on google. Alternatively, scan this QR code here on the right.



G-2 AIDS, Lyme disease, Rheumatism etc.

MEDICINAL USES - INTERNALLY

Caution: For use with pregnant women, please see the precautions mentioned on page 30.

With the following complaints, you have the choice whether you take artemisia in the higher daily dosage of 5g or the lower dosage of 1.25g.

Higher dose: Pour 1 litre of boiling water over 5g of dried leaves, or 25g of fresh leaves and drink in four portions at intervals in the course of the day. 5g dried and sieved leaves are equivalent to 4 teaspoonfuls.

Lower dose: Pour 200ml (1 big cup) of boiling water over 1.25 g of dried leaves, or 6,25 g of fresh leaves, and drink after breakfast. 1.25 g dried and sieved leaves is equivalent to 1 rounded teaspoonful.

AIDS: Supportive treatment to strengthen **the immune system:** Artemisinin has already been patented as an AIDS therapy. In several health centres that practise Natural Medicine AIDS patients drink artemisia tea, in a higher or lower dose, each day of their lives, where possible also with lemon grass tea, a lot of garlic and aloe gel. For more information, see the *anamed* publication “AIDS and Natural Medicine”, order number 115.

Bilharzia: Artemisinin reduces the number of bilharzias pathogens. Try the higher dose but continue giving the tea for 2 to 3 weeks. Possibly combine this treatment with a conventional treatment. If possible please check the result of this treatment in a laboratory and send us your results. Recent investigations in which infected animals were treated with artemether, conducted by researchers from the Institute of Parasitic Diseases, Shanghai, the Swiss Tropical Institute, Basel and the WHO, show positive results. (Shuhua et al (2000) “Preventive effect of artemether in experimental animals infected with *Schistosoma mansoni*”, Parasitology International, Vol. 49, Issue 1, pp19-24.)

Bronchitis and sore throat: Pour boiling water onto some fresh or dried artemisia leaves and put the container on a low heat. Inhale the vapour. For sore throats, gargle with artemisia tea.

Cancer, tumours: Artemisinin is already used by doctors in the treatment of tumours. Patients may, whenever possible with the support of their doctor, take artemisia tea each day and judge to what extent it influences the course of the illness.

Candida albicans in the mouth: Chew some artemisia leaves throughout the day. Children may prefer a mixture of one teaspoonful of honey with one of dried, powdered A-3 leaves.

Candida albicans in the bowels: Drink A-3 tea, made as for malaria, for 12 days.

Chikungunya and Dengue Fever: Drink artemisia tea according to the higher dose for two weeks. According to feedback we have received, the duration of fever and pain is reduced by this.

Cholera: We have received reports of successful treatments from Mozambique and Zimbabwe. Drink two litres of artemisia tea, or take 10g of straight artemisia powder, each day until healed. In addition, take oral rehydration solution. Eat something nutritious as well.

Fever, common cold: When an infection first occurs, it is better to take 3 litres of lemon grass tea each day, or in Europe 3 litres of peppermint, sage or lime flower tea. Only if the temperature persists, or if either flu or a cough persists, then take 1 litre of artemisia tea (higher dose) and 2 litres of lemon grass or peppermint tea each day for 7 to 12 days.

Haemorrhoids: This is the oldest recorded use of artemisia tea in traditional Chinese medicine. Drink one litre of artemisia tea each day. In the Gamo Gofa region of Ethiopia many people who suffered chronic haemorrhoids have had great success with this treatment (in the higher dose – see above). For mild haemorrhoids, drink an occasional cup of artemisia tea (lower dosage). Externally also use artemisia ointment (see below).

Leishmaniosis: High dose or even 10g or more per day, if tolerated, for several weeks, under medical and laboratory control.

Lupus erythematosus (a disease that causes tissues to become inflamed, red and swollen): High dose for 4 weeks, if there is no improvement, stop the treatment with Artemisia; otherwise continue with the low dose.

Stomach and Intestinal Problems, e.g. ulcerative colitis, Crohn's disease, diverticulitis and chronic dysentery: Take artemisia tea in the higher dose for 7 days, and then in the lower dose until the symptoms disappear. Artemisia disinfects the system and modulates the immune system (brings it back into balance).

Other diseases: We have received isolated reports of astonishingly good results with a range of other diseases and complaints, including gout, diabetes, high blood pressure, warts, osteoporosis, epilepsy, glandular fever, migraine, psoriasis, also various rheumatic diseases, arthritis, soft-tissue rheumatism, borreliosis, babesiosis: The gate is wide open for further research! The patients take tea using 5g of artemisia each day for a week. If there is no improvement, the treatment is stopped. Otherwise treatment is continued with 5g in the acute phase and then 1.25 g in the chronic phase.

G-3: External applications

Eye infections: Many people in the Tropics are blind (trachoma) because, as babies or young children, when troubled by flies, they could not afford expensive pharmaceuticals or a doctor. The following two recipes are only for emergencies when neither sterile eye drops nor eye ointment are available. Europeans should be cautious, as they often have an allergic reaction to artemisia pollen: Ensure that they are not allergic, and that the tea with which they bathe their eyes is made only from leaves, and not from flowers!

Recipe A: Boil 25 g of fresh or dried artemisia leaves with 1 cup of water (200 ml) for 5 minutes, and then filter through a (coffee) paper filter. Put a clean cotton cloth into this tea and briefly boil again. Leave to cool and put the wet cloth onto your eyes for about 5 minutes.

Recipe B: Mix 10 g of clean, dried and pulverised artemisia leaves (without flowers) with 100 ml olive oil and 10 g bees wax. Heat in a clean saucepan (without water bath), stirring constantly. Using a thermometer keep the mixture at 95-100 degrees centigrade for 15 minutes. Filter immediately through paper filter and pour into clean containers (e.g. seal 5 g into small polythene bags). Use on eye infections on an experimental basis. Even in disaster areas work so as to keep everything as sterile as possible. With both recipes, repeat this treatment several times a day. Treat your eyes also with aloe gel and support this treatment by drinking artemisia tea internally.

Skin problems; skin problems all over the body; athlete's foot, haemorrhoids, eczema: Use artemisia ointment for its mild antiseptic effect. Pulverise 2.5 g of artemisia leaves and mix with 50 ml of olive oil plus 50 ml of castor oil (you are free to use cheaper oils...). Heat this mixture on a water bath for 1 hour. Filter the mixture through a cloth, add 10 g of melted beeswax and immediately pour into clean glass- or plastic containers. Use within 1 year. Always apply on WET skin and rub in well. With this ointment we have had good experiences with children with eczema, where the doctor could only think of cortisone...

G-4: Further applications

Veterinary medicine. To our great surprise we have received several positive reports. The most remarkable is the treatment of cancer in dogs. In general, after harvesting artemisia leaves, the remaining stems can be given to the animals so that they can nibble them according to their need. Artemisia treats their internal bacterial infections, and even the fatal coccidiosis.

Other animals may be given cut, fresh leaves, or dried leaves mixed into their feed. Suggestion for the dosage for hens, pigs, doves etc., as replacement for the harmful antibiotics: 10g dried artemisia leaves in 1 kg feed and give for 5 to 10 days. Researchers in Romania have given affected hens 15g of dried artemisia leaves to one kilo of dry fodder to treat eimeriosis, a disease of the intestinal lining. *Artemisia annua* (sweet wormwood) is also known for the treatment of worms and flukes.

Insect repellent: Farmers in Tanzania have found that, when rows of maize plants are alternated with rows of artemisia, the maize suffer from fewer insect pests and therefore require little or no insecticide.

Mosquito repellent: To repel mosquitoes, keep several artemisia plants or keep fresh artemisia branches in a vase inside the house.

Moths: Put dried *Artemisia annua* leaves in cloth or paper bags amongst your clothes.

Drinks: To make a refreshing drink to replace commercial drinks, boil 5g of dried or 25g of fresh artemisia leaves in 1 litre of water for 10 minutes. To one cup of this tea, add 20 cups of good water and the juice of 10 lemons. Serve very cool.

H Safety instructions and evaluations

in general:

The information provided in this document is intended for educational purposes for health/medical personnel and development workers only. It is not intended that patients use this document as a substitute for the advice from your physician or other healthcare professional. Any possibility of taking an overdose must be avoided. This is particularly the case for malaria prophylaxis and treatment. anamed makes artemisia leaves available only for further processing. Any use for the treatment of disease or as malaria prophylaxis is entirely at your own risk. Neither anamed nor the authors of this document can assume any liability. The preparations and recommendations in this document are constantly being improved. They are not registered in any way in conventional medicine, and thus we cannot accept any responsibility. We emphasise therefore, that any usage is entirely at your own risk. The use of *Artemisia annua* tea as an ant-malarial was first mentioned in 168 B.C. Following the first clinical trials with artemisinin in China in 1973 and then subsequently in the United States, the market developed rapidly. Between 1991 and 1998 in Vietnam alone 31,600,000 tablets of artemisinin were taken! But each and every treatment, whether chemical, biological or traditional, is never 100% successful in all cases. Please, therefore, never have blind faith in any preparation, whether tablets or medicinal plants.

Do not use *Artemisia annua* leaves from unknown origin. *Artemisia annua* leaves must be free of contamination from heavy metals, pesticides, microbes or fungus

in developing countries

We state very clearly that our aim is to save as many lives as possible. We recommend the use of A-3 tea for treating malaria because of the overwhelming feedback we receive from Africa. The dosage that we recommend is taken from the IX Chinese Pharmacopeia and the analyses of supportive institutes. Thus on 25.4.2002 the anamed group "anamed South Kivu/Congo" was awarded the "Prix d'excellence" by the Roll-Back-Malaria programme of the WHO (a copy is provided in the artemisia starter-kit) – when did your health district win this prize??? Visit the national representatives of the WHO and the Health Ministry and show them your anamed documents and your plants. I am sure that they will congratulate you!

.....in Europe

Our main task concerns the improvement of the health situation in the developing world. As a result of lectures and seminars, particularly in Germany, an increasing number of people have become aware of *Artemisia annua*, and wish to use it to treat their own health problems. That presents us with problems. We ought to register all our preparations as medicines. The cost of the total procedure of producing a medicine from a medicinal plant costs about 5 million Euro – a nightmare, given that we have about 100 preparations! Anyway, that is not our aim. But it is also unacceptable that thousands of people here in our own countries suffer unnecessarily, just because for the pharmaceutical industry to produce medicines from medicinal plants is not financially profitable.

.....side effects

Artemisia annua promotes urination. This is a very helpful side effect, as it helps the detoxification of the body. If taking artemisia tea in the evening leads to being disturbed in the night, as when one drinks a late coffee, then the evening dose of artemisia should be taken in the afternoon. If any other side effects become apparent, either reduce the tea intake or stop it altogether. Allergic reactions are almost always caused by pollen. A-3 tea from XYZ*** is always free of pollen (in contrast to almost all other preparations), as flowering plants are thrown away. In case of indigestion (Feeling as if you have eaten too much): If taking the high dosage of A-3, then immediately increase the amount of liquid. If you take 2.5g, then drink an extra 250 ml, if you take 5g, 500 ml, and with 10 g 1000 ml more liquid!

In very rare cases with particularly sensitive patients, *Artemisia annua* may lead to an increase in blood measurements of GPT, GOT, GGT: that would mean that the performance of the liver is being affected, as sometimes occurs for example after hepatitis or excessive alcohol consumption. If this happens in your case, then consult your doctor about how to proceed: If the tumour responds positively to the artemisia therapy, then a short term, even severe, stress on the liver can be justified. If not, then reduce the dosage.

.....pregnancy and breast-feeding:

Pregnancy: See our remarks in chapter E-5

Breast feeding mothers: Artemisinin, from the artemisia tea, goes into the mother's milk. The mother, however, should continue to breast feed her baby, because the artemisia presents a much smaller risk to the child than would an interruption to breast feeding.

Short form: **Evaluations and scientific articles
concerning the worldwide work of anamed, 1.7.2022**

1. anamed: Evaluation of 120 questionnaires on the topic A-3 malaria prophylaxis

120 questionnaires were analysed from people who had spent some time in a malaria region. 50 respondents had stayed for up to 3 months, 9 up to 6 months, and 61 between 6 months and several years. 33 respondents had had malaria, or thought they may have had malaria, in spite of A-3 prophylaxis. 22 respondents had one malaria attack, 8 two attacks and 3 several attacks. 87 respondents had no malaria. Several reported that their companions who took chemical prophylaxis had malaria attacks. In answer to the question: "Would you recommend A-3 prophylaxis to people travelling in malaria regions?", of 110 respondents who replied, 104 said "yes" (95%) and 6 "no" (5%).

2. anamed: Evaluation of the starter kit: In summer 2011 we sent questionnaires to all who had received a starter kit during the period 1996 – 2009. 83 questionnaires were returned:

- Those responsible for the programme were farmers (10), teachers (11), health staff (18), no indication (8).
- The average period of the programme was 5 years; the longest one was 12 years.
- Most questionnaires were returned from Cameroon (24), Kenya (11) and Uganda (8).
- Cultivation: no success (7%), limited success (7%), full success (81%), no indication (5%).
- At the time of the survey, 33,504 plants were being cultivated, which corresponds to a surface of 3 ha.
- Altogether the 83 partners produced 31 tons of dry Artemisia leaves; enough to treat 885,000 malaria patients.
- Treatment of malaria with Artemisia tea: 34,447 patients had been observed and, of them, 32,293 were healed; this corresponds to a success rate of 94%.
- In 6 projects in Kenya, 140 children younger than 5 years were treated with Artemisia tea. The success rate was 100 %.
- In Cameroon, 123 HIV patients were treated with Artemisia tea. 100 % of them enjoyed an improvement in their health.
- The question as to whether Artemisia tea becomes less effective during long term treatments was answered as follows: "No" (52%), "Yes" (1%) and "No experience" (47%).

3. Free University of Berlin: Caroline Meier zu Biesen visited our anamed projects in Tanzania. Her dissertation "Transformation of medical knowledge: the introduction of the medicinal plant *Artemisia annua* in Tanzania" (431 pages) can be considered as an evaluation of our work. Citation page 362, translated: "Anamed clearly complies with the standards of natural science.... through anamed a social movement has started in which Artemisia; provides people with the possibility of becoming more independent of formal health facilities".

4. Leiden University, Holland: "AIDS and *Artemisia annua* anamed". Dr. Frank van der Kooy analyzed samples of A-3.

(Lubbe A, Seibert I, Klimkait T, et al. Ethnopharmacology in overdrive: The remarkable anti-HIV activity of *Artemisia annua*. J Ethnopharmacol. 2012;141(3):854–9.).

Main results are as follows:

- Stored correctly, even after 10 years, A-3 tea still has a high content of artemisinin (e.g. A-3 from South Africa with 0,5%!)
- If the A-3 tea is correctly prepared, 95% of the artemisinin can be found in the tea.
- In vitro against HIV, A-3 tea was effective with IC-50 values even with only 2 microgram /ml, whereas pure artemisinin was still ineffective with 25 micrograms.
- Samples of anamed tea with different contents of artemisinin have been used. No correlation between the anti-HIV activity and the artemisinin content could be found!
- *Artemisia afra*, which contains no artemisinin at all, has an anti-HIV activity as well.
- About a quarter of the A-3 users in Kenya and Uganda take it for AIDS.
- A-3 is an example of "scientific natural medicine in the overtaking lane."
- Even with the highest concentration of A-3 tea, no toxic cell activity was measurable.
- Pure artemisinin has little effect on HIV, the A-3 tea effect must therefore be linked to other components.
- Citation: "We can describe the tea infusion...to be highly active".

- 4. Study by the Ministry of Health in Uganda** (Patrick Engeu, NCRI, Ministry of Health, Kampala) studied the results of 191 workers of the flower company Wagagai who had been using Artemisia tea: Citation: "*Artemisia annua* tea taken once a week protects against malaria attacks. Over a period of one year, Artemisia tea reduced malaria episodes by 36%...severe malaria cases were generally fewer in the Artemisia tea group...overall no serious adverse event was recorded...Artemisia tea is a very cheap way of preventing malaria. (British Journal of Pharmaceutical Research, 1(4): 124-132, 2011 Use of *Artemisia annua* L. Infusion for Malaria Prevention: Mode of Action and Benefits in a Ugandan Community)

A-3: evaluations

Evaluation of the use of *Artemisia annua anamed*

January 2023



Dear Colleagues,

We get many requests for *Artemisia annua*, but we seldom receive feedback. Therefore, we have prepared this questionnaire and would be delighted if you would complete it. Your thoughtful answers to each question will help us to be able to give much better recommendations in the future.

We assure you that we will respect the confidentiality of your doctor or pharmacist. If you wish you may give your feedback under a pseudonym. In this case we would be grateful if you would always use the same pseudonym. Once a year, at our annual meeting in September (to which you are cordially invited, see www.anamed.org), we present a summary of the feedback so far received, and no names are mentioned. Many thanks in advance for your help!

Please enter your information after or under the relevant questions (or give a cross where appropriate) and send the questionnaire to anamed statistics, Schafweide 77, 71364 Winnenden, Germany

Name Date of birth
Address Email

1. Why do you take *Artemisia annua anamed*?
.....
2. Since when have you been taking *Artemisia annua anamed*?
.....
3. Does your doctor know that you take artemisia ? ☐ Yes ☐ No
4. How do you take *Artemisia annua anamed*? ☐ as tea ☐ as powder with yoghurt
☐ as powder with butter or margarine? ☐ in another way, how?
5. What dosage of *Artemisia annua anamed* do you take? (more than one answer is possible)
☐ 5g/Tag ☐ once a day ☐ divided in 4 doses during the day
☐ 1,5g/Tag ☐ once a day
6. The following questions are important if you take artemisia at the same time as another treatment:
Did a doctor make a diagnosis? ☐ Yes, when? ☐ No
What was the diagnosis?
.....
7. What treatment was recommended by your doctor following this diagnosis?
.....
8. Have you taken the recommended treatment? ☐ Yes, for how long?
☐ No, why not?
.....
9. Have you had any problems with taking *Artemisia annua*? ☐ Yes ☐ No
 - a.) If yes, with what dosage?
What were the problems?
.....
 - b.) Did these problems disappear after ceasing to take artemisia??
☐ Yes, in what way?
☐ No

c.) Did you start to take artemisia again later but with a lower dosage?

☐ Yes ☐ No

d.) With the lower dosage did the problems reappear?

☐ Yes ☐ No

10. What was your condition before you started to take *Artemisia annua anamed*? Please indicate with a cross and estimate the severity with a number: 0 = no problem, 10 = unbearable, the worst possible case.

☐ Pains (.....) ☐ Exhaustion (.....) ☐ Tiredness (.....) ☐ Itching (.....)
☐ Difficulty with moving (.....) ☐ Bladder infection (.....) ☐ Vomiting (.....)
☐ Diarrhoea (.....) ☐ Fever (.....) ☐ Other problems:
.....

11. What was your condition after taking *Artemisia annua anamed*? Please indicate with a cross and estimate the severity with a number: 0 = no problem, 10 = unbearable, the worst possible case.

☐ Pains (.....) ☐ Exhaustion (.....) ☐ Tiredness (.....) ☐ Itching (.....)
☐ Difficulty with moving (.....) ☐ Bladder infection (.....) ☐ Vomiting (.....)
☐ Diarrhoea (.....) ☐ Fever (.....) ☐ Other problems:
.....

12. Have you used any other unconventional (alternative) treatments? If so, what?

.....

Have these treatments helped? ☐ Yes, how? ☐ No

.....

13. Please answer this question only if you have been treating a tumour with artemisia:

a.) Do you also take iron? ☐ Yes ☐ No

14. Please only answer if you use or have used artemisia as a malaria prophylaxis:

In which country and region?.....

During the period from to =weeks

For how many weeks have you ONLY taken artemisia tea as prophylaxis?

Have you experienced any negative side effects? If so, what?

.....

Have you experienced any positive side effects? If so, what?

.....

In spite of taking artemisia, how often have you had malaria (confirmed by a blood test)?.....

How often do you imagine, without artemisia, you may have had malaria?

Were there others with you who took a conventional prophylaxis? ☐ Yes ☐ No

If yes, did they have malaria more often or less often than you? ☐ More often ☐ Less often

Would you recommend others to use artemisia tea as prophylaxis? ☐ Yes ☐ No

Why?

.....

.....Date

I: anamed: A worldwide network: Work with us!

The anamed edition is a part of the anamed network. This network stands on 4 feet:

1. anamed edition

We do not conceal or patent anything! You can produce all our medicines yourself on site in the tropics. As a result of our seminars, posters and books have been produced which you can use in the tropics!

We send our books ourselves, because:

- They should be as inexpensive as possible.
- The books should only be printed in small print runs and should be constantly updated; they should not be "out of print" if a publisher no longer sees any economic interest in them.
- If there is interest, they should be adapted for other tropical countries and translated into their languages at any time. And if you have experience with our recipes, we are interested in your suggestions and criticism!
- By shipping literature and materials ("anamed edition") in Germany, we cover part of our costs and are therefore less dependent on donations.

2. anamed international e.V.

Circle of Friends Action Natural Medicine in the Tropics (anamed). Our goals are: To promote the international exchange of knowledge about tropical medicinal plants for the benefit of humanitarian organisations. Promotion of national activities in "natural medicine": a step against the threatening patenting of medicinal plants. We jointly create medicinal gardens (for information) and medicinal fields (for production). We develop recipes to convert these medicinal plants into medicines. These medicines are to be used in humanitarian pharmacies or undersupplied clinics. Unnecessary imports are avoided. "anamed international e.V." is a circle of friends who support anamed groups in developing countries. We meet several times a year. The newsletter reports regularly about this work and is sent to the donors twice a year. Donation account: anamed international e.V.: IBAN: DE12 6025 0010 0007 2190 69 Swift/BIC Code: SOLADES1WBN. Please use this account ONLY for donations, thank you!

3. anamed seminar program

A service for missions, churches, non-governmental organizations in developing countries:

- Seminars will be held to exchange information about the importance and methods of protecting medicinal plants and their processing into medicines - on site!
- Pharmacists, doctors, nursing staff, theologians, healers and traditional midwives work together.
- Seminar program: We work for one week on medicines using the booklet "Natural Medicine Seminar Handbook".
- Different churches take part in these seminars, an ecumenical understanding is promoted.

4. anamed research programme

Artemisia annua - Medicines from it are usually unreachably expensive for the population. Wild plants of this species have 3 disadvantages: they do not grow in the tropics, have few leaves and too little active ingredient to be able to act in the form of a tea. The variety "*Artemisia annua* anamed" on the other hand is rich in content and leaves and grows up to 3 m high on our fields e.g. in Germany, Africa, Asia, South America, etc. ... The "Malaria plant *Artemisia* starter kit" will be put together individually according to your language skills. It contains seeds, materials, all necessary instructions in words and pictures for sowing, vegetative propagation; harvesting, storage and use of the tea; in optional German/English/French/Portuguese/ Spanish/Swahili; furthermore scientific literature in English. With this "starter kit" you as a development worker can plant many *artemisia* fields for many years and thus successfully treat thousands of patients with tropical malaria, and also often give new hope to AIDS and cancer patients, see our publications on this subject.



anamed edition

Schafweide 77, 71364 Winnenden, Germany

Web: www.anamed-edition.com

Infos about the A-3 Starterkit

We shall be pleased to welcome you as a partner in the anamed artemisia programme.

The starter-kit contains:

- 5000 seeds of *Artemisia annua* anamed (A-3). They are supplied in an air-tight plastic container with silica gel.
- one 50g packet of artemisia leaves.
- peat disks for easy sowing.
- materials to aid in taking cuttings.
- the document “*Artemisia annua* anamed: Cultivation and uses” in English, French, German, Portuguese or Spanish (please specify which you require). This document gives comprehensive information, particularly regarding the treatment of malaria.
- the document “*Artemisia annua* anamed: From research to experience”. Over 50 further pages of scientific information in English.
- a folded poster of medicinal plants.
- the book “Natural Medicine in the Tropics I” by Hirt and M’Pia.
- the booklet “Natural Medicine in the Tropics: II Treatments” (our seminar handbook).
- the booklet “AIDS and Natural Medicine”.
- a request for feedback.

Total weight about 1.5 kg.

We can supply our starter kit only for humanitarian, never commercial use, to:

- a) Community groups, NGOs, churches, missionaries and others who wish to grow *Artemisia annua* in developing countries, in order that the local community can treat malaria with their home grown artemisia tea.
- b) People or organisations in the Tropics who wish to grow Artemisia, but never for exportation. For the reasons explained on our web-site, artemisia must be grown to treat malaria directly in the community as tea or powder.
- c) Researchers and research organisations, which have the aim of helping their country to become more independent in treating malaria.

A little more information is given in this short video:

www.youtube.com/watch?v=sGTnDLOW-IE&feature=channel

When making your order, please complete the following:

1. Address to which the kit should be posted:
- 2a. In which country will the kit be used?
- 2b. In which district or region?
3. Address and email in that country, if known.
4. Which languages do you prefer for the starterkit?
5. As the purchaser of seeds of *Artemisia annua* from anamed international, I undertake that I will neither sell artemisia leaves or tea within Europe, nor will I sell these products through the internet.

Provide your name here to indicate your agreement:

from 01. Jan 2023

Actual prices: See our website. Orders by post or email with or without this form (not by telephone) to info@anamed-edition.com, or to anamed, Schafweide 77, 71364 Winnenden, Germany. Orders from outside of Germany must be paid in advance; once we have your order, we send you a "pro forma" invoice. Please wait for this. You may then pay either by banc transfer, or by PayPal, or by Western Union (only cash to banc account).

Order number Item

NEUTRAL

409	Anamed Artemisia Programme Starter-kit with 5000 seeds = 120€	= €.....
412	Artemisia, refill pack of 5000 seeds= 45€ (only for people who purchase / purchased No. 409)	= €.....
502	Moringa oleifera 120 germinable seeds = 30g = 8€	= €.....
505	Moringa stenopetala 40 germinable seeds = 20g = 8€	= €.....
400	White sheet, 70 x 100cm, laminated on both sides for teaching with markers = 10€	= €.....
404	Colour poster of 60 medicinal plants, no text, laminated for use with markers = 10€	= €.....
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434	ANAMED-DVD: Videos, Poster, Powerpoints concerning anamed and Artemisia = 20 €	= €.....
116	"4 ULOG SOLAR OVENS and one drier": Construction-plans and uses = 12 €	= €.....

ENGLISH

105	Book 1: "NATURAL MEDICINE"; = 16 (14*/12**) €	= €.....
106	This book together with folded colour poster (403) = 22 (19*/16**) €	= €.....
109	Book 2, "Nat.Med: Seminar handbook" (treatment of diseases) = 8 (7*/5**) €	= €.....
113	Book 3, "Nat. Medicine for teachers" Resource kit for seminar leaders = 20 €	= €.....
115	Book 4, "AIDS and Natural Medicine" = 5 (4*/3**) €	= €.....
204	Document 1: "Artemisia annua anamed: Cultivation and uses" = 8 (7*/5**) €	= €.....
220	Document 2: "Artemisia annua anamed: From Research to Experience" = 15 €	= €.....
403	Colour poster of 60 tropical med.plants 70x100cm, folded or as roll ² = 6 (5*/4**) €	= €.....
440	Colour poster of 60 tropical med.plants (70x50cm) = 4 (3**) €	= €.....
419	MORINGA documentation = 6 (5*/4**) €	= €.....
421	MORINGA: documentation and each 30g of seeds of M. oleifera und stenopetala = 20 €	= €.....
107	Book "USE WATERHYACINTH!" incl. instructions for solar oven constr. = 7 (6*/5**) €	= €.....
117	"NEEM in medicine and agriculture": Document = 5(4*/3**) €	= €.....
201	Document: "Mercury soaps: A Modern Day Scandal " = 5(4*/3**) €	= €.....
450	"Black is beautiful" 10 Posters DIN A3 about dangerous cosmetics, English = 8 (7*/6**) €	= €.....

FRENCH

103	Tome 1 : "LA MEDECINE NATURELLE" = 16(14*/12**) €	= €.....
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203	Document « A-3: Culture et utilisation » = 8 (7*/5**) €	= €.....
420	MORINGA: Documentation en français = 6 (5*/4**) €	= €.....
422	MORINGA: Documentation plus semence, 30 g de M. oleifera et 30 g de stenopetala = 20 €	= €.....
206	Document:"Rester Noire et Belle“, un scandale aux pays tropicaux = 5 (4*/3**) €	= €.....
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