

# Family Medicine Plants in the Covid-19 Pandemic Based on Ancient Sundanese Manuscripts

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## ABSTRACT

The ancient Sundanese manuscript as a legacy of the past is important and needs to be informed of its current existence. The undeniable fact is that there are still many Sundanese manuscripts whose contents have not been revealed, especially those related to traditional medicinal plants, known as *Tanaman obat keluarga* (TOGA). What types of plants, what are their functions, and how, and their treatment actions are hidden in the manuscript. It is the philologist's job to inform the public, so that other disciplines can use it in a multidisciplinary manner, especially medical texts that are useful for preventing and increasing immunity during the Covid-19 pandemic. In the era of globalization, local wisdom of the past culture, which is revealed in the Old Sundanese manuscript, should be ogled and studied on an ongoing basis and must be done immediately. This research uses descriptive comparative analysis research methods, and multidisciplinary philological and cultural studies methods. To reveal the elements, functions, and benefits of the TOGA, a brief pharmacological study is also used. In compiling the encyclopedia, lexicographic procedures were used, through heuristics, selection, gradation, and presentation stages, which were expected to be able to describe, classify, study, and analyze the types, functions, doses, procedures and treatment actions revealed in the Sundanese manuscripts of the 19th Century AD this research aims to make the public better understand and be wise in sorting and choosing TOGA according to its use. The results of this study are not only useful for the field of philology, but can also be used by the fields of medicine, pharmacy, public health, dentistry, nursing, and agriculture.

**Keywords:** *Medicinal plants, ancient Sundanese manuscript, Covid-19 pandemic*

## 1. INTRODUCTION

It has been almost two years since the world has been hit by the Covid-19 disaster. Now more rampant when a new variant appears, which is very quick to react and deadly. Facing Covid-19, it is as if we are fighting with supernatural beings, which are invisible but when they attack humans, it is very dangerous. The outbreak of the virus pandemic has made the Indonesian people remain vigilant, because many of its people have been infected. Until now, two-thirds of millions of people have been exposed to Corona, but many have recovered. There were also those who died, although not as many as those who recovered.

So far, the government has done a lot, and it is considered good, by implementing Large-Scale Social Restrictions (PSBB) and emergency PPKM,

level one to level four, some of which may still apply in some areas in Indonesia. Some Indonesians have also been vaccinated. In this case, growing public trust and confidence so that they are willing and willing to be vaccinated is very important, to break the chain of spread of Covid-19 and its wider variants. In relation to the current situation and conditions, as an academic community, what should we do to prevent and overcome it? Are you just sitting around without taking part in finding the best solution so that the Covid-19 pandemic and its variants end quickly?

In the midst of the rise of the Covid-19 issue, before the Covid-19 vaccine was found, information appeared on various preventive and antidotal drugs, both in the form of traditional medicine or TOGA as well as medical drugs. Actually, if our body has a high 'immunity', of course bacteria, germs, and even viruses will not be able to penetrate it. With regard to news

about traditional medicinal plants to prevent Covid-19, during the pandemic, traditional medicinal plants such as *jahé* (ginger), *konéng* (turmeric), *cikur* (aromatic ginger), *secang*, *séréh* (lemongrass), and cinnamon are in high demand, so they are very popular. selling well in the market, even the price soared up to three times the usual price. On the one hand, this also benefits the farmers in this field. Various kinds of medicinal plants or TOGA, which are revealed in Old Sundanese manuscripts in the XVI century AD, especially those related to the text

Pandemics caused by diseases in the Old Sundanese manuscript have been known since ancient times. In Sundanese society, the term "*utek tongo walang taga*" is an animal and various "*ron-ron gogodongan*" are known as leaves, which are currently known as flora and fauna. The meaning of "*utek*" is defined as an animal in the form of a small micron (microscopic) that is not caught by the eye, or is not visible to the naked eye; "*tongo*" (mite), a type of animal such as an insect, usually red in color, is a carrier of disease, both bacteria, germs, and viruses, which if entered into the human body will become disease. Meanwhile, "*ron*" is a leaf that is able to cure various diseases caused by these pests.

Family medicinal plants (TOGA) have long been known by the Sundanese people, as shown in Picture 2, which functions to treat various diseases. If associated with the Covid-19 pandemic, family medicinal plants are expected to increase endurance or immunity, which is also revealed through the Old Sundanese manuscripts of the XVI century AD, *Kropak 421 "Mantra Aji Cakra"* containing an antidote and *Darmapamulih* (medicinal spell), and *Kropak 409 "Soeloek Kidoengan Tetoelak Bilahi"*, made from palm leaves, in Old Sundanese manuscript and language. In the Medical Manuscript, it is stated that plants or plants that function as antidotes or can cause a person to become immune to attacks by viruses, germs, or bacteria, are accompanied by methods of treatment.

Manuscripts are cultural documents that contain thoughts, feelings, and knowledge of the nation or socio-cultural group, which contain the cultural values of the people who own it. However, until now there are still many Sundanese manuscripts, especially the Old Sundanese whose contents are not yet known [2]. Because the study of ancient Sundanese manuscripts is not as easy as turning the palm of the hand. To reveal the content or text of the manuscript, knowledge, skills, and letters are needed.

of the Medical Manuscript are very abundant, revealing the intricacies of medicinal plants and traditional medicine, along with their properties and functions, to ward off and treat or as body immunity. What is meant by traditional medicine is ingredients or ingredients in the form of plant/plant materials, animal materials, mineral materials, *sarian* (galenic) preparations, or mixtures of these materials, which have been used for generations for treatment, and can be applied in accordance with established norms. happens in society [1].

Language and culture, in addition to having knowledge of materials and the history of the development of religion, culture, and other sciences in a multidisciplinary manner in accordance with the contents contained in the manuscript being studied. The existence of philological research makes it easier for manuscript enthusiasts to read and understand the contents of the text hidden in it.

This paper is expected to be able to open the horizons and views of the community about the benefits and importance of preserving medicinal plants, which are contained in the Sundanese manuscript containing the text of medicines, which are useful for the community, especially for the fields of medicine, pharmacy, and public health in a multidisciplinary manner, through research outputs in the form of an encyclopedia of family medicinal plants, which is one model of learning lexicography and other sciences, which seeks to explain what medicinal plants are mentioned in ancient manuscripts, whether currently these medicinal plants are still used or not in today's society. The functions and benefits of medicinal plants in an effort to overcome Covid-19, which is expected to provide benefits in terms of increasing the level of public health through the use of good and correct traditional medicines.

The use of medicinal plants is not without risk if consumed carelessly. Each type of medicinal plant, both from scripts and circulating in the community, is actually researched first by experts, determining the dosage, usage, and processing method appropriately. Because so far we have only used the measure of "a piece, a handful, a bunch, a sheet, a sprig, a glass, a spoonful, a pinch", it is not explained how big or small, how many ingredients are processed, drunk or eaten. If it is not targeted correctly, complications can occur, because to treat a disease, one does not only use one type of plant, but also mixes it with other medicinal plants, just like medical drugs.

Even though the Covid-19 vaccine has been found and has begun to be injected into the community in Indonesia, however, by consuming medicinal plants with the correct dosage, use, and method, it is at least

able to increase immunity/immunity, to ward off viruses, germs, bacteria that enter into our bodies [3]. This is one of the goals in this study, so that the public understands and understands TOGA better. In addition, so that people are wiser in sorting and choosing medicinal plants so that they are effective and on target. This paper which is the result of research is very useful for the fields of pharmacy, public health, agriculture, dentistry, and medicine, in addition to entrepreneurship, and dictionaries, through glossaries and encyclopedias of traditional medicines based on Sundanese manuscript.

## 2. LITERATURE REVIEW AND METHODOLOGY

The Study of Family Medicinal Plants in the Covid-19 Pandemic Period Based on Old Sundanese Manuscripts in the XVI Century AD is included in the scientific area of philology and culture in general, because it focuses on the study of manuscripts, and their relation to other sciences in a multidisciplinary manner, such as medicine, dentistry, nursing, chemistry, pharmacy, and public health, anthropology as well as literature and culture. This is possible because basically culture includes seven elements in general. Thus, this research is also included in up-to-date research, because the function of the script can be implemented in the life of today's society, especially during the Covid-19 pandemic. The research and studies that have been carried out are related to the issue of 'Medicine Manuscripts', most of which are based on mantras as oral literary works, which are closely related to folklore. However, in this paper, the reference literature only involves previous research on medicinal plants in the Sundanese text manuscripts.

Ekadjati and Darsa [4] has translated the *Kropak 421* manuscripts, including the *Mantra Aji Cakra* and *Darmapamulih* which are ancient manuscripts in the 16th century AD, in Sundanese manuscript and in Old Sundanese language. Research related to *mantra* entitled *Mantra Sunda in the Old Manuscript Tradition: Between Convention and Innovation* by Sumarlina (2012) which is a dissertation, in addition to the Agricultural Manuscript itself and the Astrology Manuscript. In connection with the existence of Mantra, the Old Sundanese manuscript of the 16th century AD, *Kropak 421* contains several mixed manuscript texts (*gemengd*), including four manuscript texts, consisting of the *Silsilah Prabu Siliwangi*, *Mantra Aji Cakra*, *Mantra*

*Darmapamulih*, and *Ajaran Islam*, which are specifically contains Islamic teachings [5] [6].

The study of the treatment script was carried out by Sumarlina, et al. entitled *Rahasia Obat dan Pengobatan Tradisional yang Terkual Lewat Naskah Mantra Sunda: Keterjalinan dan Keselarasan Dengan Adat dan Tradisi Masyarakat Baduy* in 2017-2019. In addition, a study entitled *Pemanfaatan Naskah Pengobatan Sebagai Solusi Penyehat Pengobatan di Masyarakat Adat*, which was conducted by Sumarlina, et al. (2020-2021). This research is related to medicine philologically, through comparative descriptive research methods, and textual criticism methods, both codicologically and textologically, which involves cultural and pharmacological studies methods to reveal the elements and functions of medicinal plants contained in each type of TOGA, as an effort breaking the chain of transmission during the Covid-19 pandemic [7].

## 3. RESULT AND DISCUSSION

Evidence that our ancestors used natural ingredients as traditional medicine can be seen from various old manuscripts made from palm leaves, *daluang*, paper in Sunda (*Mantra/Jangjawokan/Jampé* and *Tatamba*), *Husodo* (Java), *Usada* (Bali), *Lontarak Pabbura* (South Sulawesi), the *Serat Primbon Jampi* document, the *Serat Racikan Boreh Wulang Dalem* and the reliefs of the Borobudur temple depicting people concocting medicine (*jamu*) with plants as raw materials [8]. In a study conducted by Sumarlina, et al. (2018) it is known that various medicinal plants are also mentioned in various *Mantra* manuscripts found in the West Java region [9].

The strategy of utilizing various medicinal plants to overcome health problems as part of culture is known as local wisdom, which according to Fajarini [10] is a view of life and knowledge as well as various life strategies in the form of activities carried out by local communities in responding to various problems in meeting their needs.

The use of traditional medicine in Indonesia is part of the nation's culture and has been used by the community for centuries, but in general its effectiveness and safety have not been fully supported by adequate research results. Considering this and realizing that Indonesia is a mega-center of medicinal plants in the world, it is necessary to have a national policy that can be a reference for all parties involved in it.

The tradition of consuming herbs from medicinal plants for various purposes has been carried out by the ancient ancestors. One of the goals is to treat, both for

yourself and for others. This shows that traditional medicine using medicinal plants has become a culture and has a very real contribution to health for the community. Therefore, ingredients from medicinal plants are constructive, effective, safe and relatively inexpensive, so the existence of these herbs will be needed at any time. Traditional medicinal herbs are believed to be able to provide healing for almost incurable diseases [11].

Ulfah [12] revealed that one plant usually produces more than one type of secondary metabolites (phytoalexins, organic acids, essential oils and others) so that it is possible for one plant to have more than one pharmacological effect. The combination of several types of active ingredients shows a higher work effectiveness than the use of a single active ingredient. The pharmacological effects of each component of chemical compounds can support each other (synergistic) to achieve treatment effectiveness but can also be opposite (contradictory). In the formulation of ingredients for certain purposes, they must be made as precise as possible so as not to cause contra indications, even the type of ingredients that support each other to the desired effect must be selected. An ingredient

formulation should consist of 1) the main component as the main element in the treatment goal, 2) the supporting element, 3) the element that helps strengthen the effect, and 4) the complementary or balancing element in the formulation. Each of the above elements can generally be met from more than one type of medicinal plant so that the composition of medicinal plants is very diverse.

Activities related to traditional medicinal plants have been carried out by many researchers from the fields of health, agriculture, medicine, public health, and even medicine. But the data used is data that has to do with medical. However, the research that will be carried out is taken from the Old Sundanese manuscripts of the sixteenth century, which is rarely done by previous researchers. Because to reveal a manuscript text, researchers must master the script, language, and culture in which the manuscript was written or copied. But there are not many experts in that field. Therefore, there are still many ancient Sundanese manuscripts that have not been touched and have not been studied, especially those containing traditional medicines. Table 1 shows the names of diseases, drugs, and methods of use whose ingredients were commonly used by ancient people and are still used by some people today, especially in indigenous peoples.

**Table 1.** Name of Disease, Medicine, and How to Use it

No.	Symptom	Medicine and How to Use it	No.	Symptom	Medicine and How to Use it
1.	Do not want to eat	The medicine is a young orange leaf the size of a patient's fist, crushed and then the juice is taken, added with salt and then drunk. There are taboos, try not to drink for one day.	15	Psychoneuritic	The medicine is three pieces of kaffir lime, salt, vinegar, pounded and then drunk. To be dropped on the patient's ears, ginger, spicy ants, garlic and then ground.
2.	Urinary stones (Urolitiasis) / impotence	The medicine is pepper, <i>cabé areuy</i> , nutmeg, cloves then pounded until smooth, drink it every morning and evening.	16	Hunchback	The medicine is fennel, <i>pulasari</i> , fire leaves, sprayed.
3	Cold/Fever	The medicine is red onion, ginger, <i>lampuyang</i> , pounded until smooth, then smeared all over the body until evenly distributed.	17	Pubic pain	The medicine is old betel nut, pepper, fennel, <i>pulasari</i> , ginger, tanjung flower, pounded and then drink it.
4.	Cleft/nasal	The medicine is candlenut, fennel, <i>kaliki</i> , <i>pulasari</i> , incense, crushed and then massaged.	18	Headache on the crown	The medicine is lock, <i>carulang</i> , <i>rinu</i> , <i>cabé areuy</i> , kaffir lime peel, rubbed.
5.	Short tongue so it's hard to talk	The medicine is ginger, pepper, <i>cabé areuy</i> , lime, pounded until smooth and then drink it.	19	Spinal cord pain	The medicine is palias grass and locks.
6.	Crooked hands	The medicine is basil leaves, nettle, <i>lempuyang</i> , <i>rinu</i> , then massaged.	20	Breathing on the neck	The medicine is black sugar cane, nettle, and garlic.

7.	Side high shoulder	The medicine is cardamom leaves, <i>katumpang</i> , <i>cabé areuy</i> , <i>laja</i> , <i>cikur</i> , vinegar, mashed until smooth and then smeared evenly.	21	Hard to breathe	The medicine is male quail, garlic, incense, honey, <i>laja/laos</i> , grated and then sprayed.
8.	Limp	The medicine is betel, <i>patimah</i> , <i>angen</i> , nets, garlic, lime, <i>rinu</i> , <i>cabé areuy</i> , ground pepper and spread evenly throughout the body.	22	Mute	The medicine is orange, cucumber, garlic, shrimp paste, <i>laja/laos</i> , grated and then sprayed.
9.	Deaf	The medicine is <i>tangkolo</i> leaves, bitter ginger, ants, <i>laja</i> . All the ingredients are ground and then dropped on the ear.	23	Liver / Heart feels hot	The medicines: 1) Turmeric and whiting and clapping three times and holding your breath. 2) If it doesn't work, the medicine is seven pieces of ginger, <i>ki serut</i> leaves, <i>singugu</i> leaves, basil, shallots, <i>mesoyi</i> , coriander, cumin, then sprayed.
10.	Cold/hoarse voice	The medicine is fragrant pulp, finely ground and then dripping.	24	Porous bones	The medicine is rice washing water, nettle, garlic, one clove of amethyst seeds, rubbed all over the body.
11.	Intestinal neck pain	The medicine is sesame oil and lime to drink.	25	Catch a cold	The medicine is bamboo shoots, bitter bamboo shoots and <i>bintinu</i> , ground and then rubbed.
12.	Intestinal	The medicine is <i>mesoyi</i> , candlenut, then sprayed.	26	Bad breath	The medicine is nets that are ground with roasted spices and then rubbed.
13.	Shoulder joint pain	The medicine is pepper, garlic, egg shell, tamarind, salt and then pounded and smeared.	27	Gout	The medicine is <i>mesoyi</i> , salt and ginger, taped and rubbed.
14.	Paralyzed/limping	The medicine is pepper, chili areuy, egg shell, salt and ground and then drink it.	28	Basic abnormalities	The medicine is 25 kinds of leaf color attached and sprayed.

There are approximately 75 types of medicinal gardens commonly used by indigenous peoples and are also included in medicinal texts, which are useful for increasing immunity and endurance, for preventing and overcoming the Covid-19 pandemic. However, in this paper, only 36 types of medicinal plants are presented and discussed. The spices of these medicinal plants are currently the prima donna. Among them, various types of *konéng* (turmeric), be it *konéng teman emprit* (*emprit* small turmeric), *konéng bodas* (white turmeric), *konéng hideung* (black turmeric), *konéng beureum* (red turmeric), and *konéng gedé* (big turmeric), known as *temulawak* (*Curcuma xanthorrhiza roxb*) contains essential oils, which are efficacious in increasing the body's resistance. Turmeric (*Curcuma domestica*) in addition to increasing immunity, treating fever, diarrhea, anticancer and scabies, preventing depression, overcoming inflammation, preventing Alzheimer's, ulcers, inhibiting chromosomal damage, maintaining brain power, reducing depression, and maintaining sugar in diabetics.

Another plant that can increase endurance is *Jukut Teki* (Teki Grass/*Cyperus rotundus L*), can treat heart disease, asthma, cancer. *Nangka Walanda* (soursop), able to increase endurance, asthma, cough, and hypertension. *Katuk* leaf (*Sauropus androgynus*), in addition to boosting immunity and body resistance, is efficacious in launching breast milk, fever, dirty blood, osteoporosis and influenza. *Sembung* (*Blumea balsamifera*) leaves cure influenza. *Secang* stems treat inflammation, fever, cancer, diabetes, high blood pressure, treat cold body due to influenza, sore throat. *Binahong* leaves (*Anredera cordifolia*) in addition to increasing endurance, overcoming shortness of breath, diabetes, high blood pressure, coughing up blood, lungs, stroke. *Babadotan* (*Ageratum conyzoides*), treats cancer, diabetes, fever, and malaria. Ginger (*Zigiber officinale*) increases endurance, treats coughs, colds, anti-inflammatory, cancer, warms the body, migraines, allergies, whooping cough, and rheumatism. Ginger has several varieties, namely elephant ginger, yellow ginger, and red ginger, which contain lots of essential oils, especially to increase endurance. Yellow ginger is used for cooking spices, elephant ginger is used for drinks.

Cinnamon as an antioxidant, plays a role in increasing endurance, anticancer, diarrhea, colds, flu, hypertension, bronchitis. *Cikur (kencur) (Kaempferia galanga)* in addition to increasing endurance, efficacious in curing sore throat, liquefying mucus or phlegm, as well as anticancer drugs. Citrus fruits in addition to boosting immunity, digestion, high blood pressure, cancer, heart, kidney, asthma, likewise with tamarind (*Tamarindus Indica*). *Pulosari* treats shortness of breath, sore throat, cough, gallstones, cervical, antitoxin, analgesic, infection, lowers blood glucose levels, antidiarrheal, anticancer, antimalarial, upper respiratory tract infections, colds, flu. Fennel (*Foeniculum vulgare*), as an ingredient of telon oil, is efficacious in curing cough with phlegm,

shortness of breath, asthma, stomach pain, diarrhea, bleeding hemorrhoids. *Asparahas (asparagus) (Asparagus cochinchinensis)*, can increase immunity and reduce fever, antitoxin, cleanse the lungs, treat coughing up blood, sore throat, breast cancer, breast glands, and diabetes.

Other traditional medicinal plants that function to increase the body's immunity include garlic and onions. Garlic and grated ginger, plus a little salt, the result of the mixture, in the text is said to be efficacious in curing wet lung disease. Meanwhile, *jambu kulutuk* (guava) can overcome diseases caused by viral and bacterial infections, one of which is in the case of influenza, in addition to helping reduce fever.

**Table 2.** Medicinal Plants in Medical Manuscripts as Prevention and Curing Covid-19 Diseases

No.	Plant Name	Latin Name	Efficacy
1.	Fennel	<i>Foeniculum vulgare</i>	Cough and fever, abdominal pain (diarrhea) medicine, and laxative urine, increase endurance
2.	Bitter	<i>Andrographis paniculata</i>	Fever and sore skin medicine, increase endurance
3.	Cardamom fruit	<i>Elettaria cardamomum</i>	Cough, fever, asthma, bad breath medicine
4.	<i>Katuk</i> leaves	<i>Sauropus androgynus</i>	Fever, influenza, breastfeeding medicine
5.	Moringa leaves	<i>Moringa oleifera</i>	Asthma, gout, respiratory tract medicine
6.	Galangal	<i>Languas galanga</i>	Medication for skin pain, skin rash
7.	Jasmine leaves	<i>Jasminum sambao</i>	Fever and internal heat medicine
8.	Turmeric	<i>Curcuma domestica</i>	Medication for stomach pain, diarrhea, laxative, skin pain medication, ulcers, fever, appetite enhancer, increases endurance
9.	Pumpkin	<i>Lagenaria leucanthea</i>	Fever and internal heat medicine
10.	Breadfruit leaves	<i>Artocarpus communis</i>	Fever and internal heat medicine
11.	Sour fruit flesh	<i>Tamarindus indica</i>	Drugs to increase immunity, skin pain, weak laxative
12.	<i>Brotowali</i>	<i>Tinospora tuberculata</i>	Medicine for fever and skin pain, boost immunity
13.	Aromatic ginger	<i>Kaemferia galanga</i>	Medication for skin diseases, coughs, increases body resistance
14.	Hibiscus leaves	<i>Hibiscus tiliaceus</i>	Cough and ulcer medicine
15.	<i>Pulasari</i> Bark	<i>Alyxia stellata</i>	Cough medicine, fever, abdominal pain, diarrhea medicine, increase immunity
16.	Shallot	<i>Allium sativum</i>	Cough, fever, cold medicine
17.	Garlic	<i>Mimusops elengi</i>	Fever, wet lungs, colds medicine
18.	Cucumber fruit	<i>Piper oubeba</i>	Cold medicine
19.	<i>Wuluh</i> starfruit flower	<i>Averrhoa bilimbi</i>	Cough and fever medicine
20.	Eucalyptus leaves	<i>Melaleuca leucadendra</i>	Cough, fever, cold medicine
21.	Clove	<i>Tetracera scandes merr van hebecarpa</i>	Cough, colds, fever medicine
22.	Kapok leaves	<i>Ceiba pentandra</i>	Cough and diarrhea medicine
23.	Hibiscus leaves	<i>Hibiscus rosa-sinensis</i>	Fever medicine
24.	Lemongrass	<i>Andropogo nardus</i>	Gout and cold medicine
25.	<i>Meniran</i>	<i>Phyllanthus niruri</i>	Cough and colds medicine, laxative urine
26.	Ginger	<i>Zingiber officinale</i>	Cough and colds medicine, increase appetite
27.	Guava leaves	<i>Psidium guajava</i>	Medicine for stomachache, diarrhea, skin pain
28.	<i>Johar</i> leaves	<i>Cassia siamea</i>	Malaria medicine, dirty blood purifier
29.	Cumin leaves	<i>Coleus amboinicus</i>	Cough and fever medicine
30.	Lime	<i>Citrus aurantifolia</i>	Cough, stomach ache, skin pain medicine
31.	<i>Tapakliman</i> leaves	<i>Elephantopus scaber</i>	Cough medicine, diarrhea, fever

32.	Saga leaves	<i>Abrus precatorius</i>	Cough medicine, thrush medicine
33.	Turi leaves	<i>Sesdania grandiflora</i>	Cough, headache, fever medicine
34.	Cucumber	<i>Cucumis cativus</i>	Fever, internal fever, acne medicine
35.	Patikan leaves ( <i>kebo</i> )	<i>Cucumis sativus</i>	Cough, skin pain, stomach ache medicine
36.	Gotu kola	<i>Centella asiatica</i>	Cough, fever, hemorrhoids, skin pain medicine

People generally think that the use of herbs is safer than the use of modern medicine because it has no side effects. This assumption is not entirely true, because medicinal plants have various active substances which if used not as recommended, of course, can have an adverse impact on health. Improper use of traditional medicine (right ingredients, right dose, right time, right method of use, right review of information, right indication, and without misuse) can cause fatal problems.

WHO has supported efforts to increase the safety of the use of traditional medicines. The things that are driving the increase in the use of plant-based drugs in developed countries are, among others, the search for other alternative treatments because the results achieved by modern medicine are considered not always satisfactory, as well as the reputation of traditional medicine which is getting better throughout the world [13], or because anti-virus has not been found, as is the case with Covid-19. Currently, vaccines, especially those related to Covid-19, have been found. However, it seems that for indigenous peoples, the use of family medicinal plants or traditional plants is still being carried out.

Circulation of the statement that medicinal plants are always safe, there is no risk of harm to the health and safety of consumers is wrong, because in fact there are not a few types of traditional medicines that contain toxic active substances, this is in accordance with a report from WHO, which revealed that the effects of using medicinal plants, occurs due to errors in identifying the type of plant used, incorrect dosage, interactions with other drugs and due to mixing of traditional medicines with hazardous materials/microbes such as heavy metals, pathogenic microbes and agrochemical residues [14].

The Indonesian government makes a guideline for the use of medicinal plants, which is based on research results so that it has a strong evidence-based medicine (EBM) basis. The guidelines are contained in the Decree of the Minister of Health of the Republic of Indonesia number HK.01.07/Menkes/187/2017 concerning the Formulary of Indonesian Traditional Medicines (FROTI), which is compiled based on health problems that are commonly found in the community. The use of ingredients in FROTI is

directed to maintain health and help reduce patient complaints.

The ingredients in FROTI are used as a complement to treatment if used in conjunction with conventional treatment after first communicating with medical personnel (doctors). The rational use of ingredients and according to the instructions for use, is expected to help the community in maintaining and improving health.

Traditional medicine in this formulary has safety data that is proven minimal by acute toxicity data (LD50). Most types of medicinal plants found in medicinal texts are contained in the FROTI guidelines, which explain the dosage, method of use, indications, contraindications, side effects, drug interactions and how to use them [15].

The use of medicinal plants is not without risk if consumed carelessly. Each type of medicinal plant, both from scripts and circulating in the community, is actually researched first by experts, determining the dosage, usage, and processing method appropriately. Because so far only use the measure (a piece, a handful, a bunch, a sheet, a sprig, a glass, a spoonful, a pinch), it is not explained how big or small, how many ingredients are processed, drunk or eaten. If it is not targeted correctly, complications can occur, because to treat a disease, one does not only use one type of plant, but also mixes it with other medicinal plants, just like medical drugs. For this reason, special research is needed, related to the benefits and content of substances in these medicinal plants, so that people understand and understand how to use them.

**Table 3.** Names and Types of Plants in the Community Based on Sundanese Medical Manuscripts

No.	Plants Name	Efficacy	Processing
1.	Bitter	<ul style="list-style-type: none"> <li>- Boost immunity</li> <li>- Relieve cold symptoms</li> <li>- Prevent cancer</li> <li>- Reduce fever</li> </ul>	<ul style="list-style-type: none"> <li>- Bitter leaves boiled with water.</li> <li>- Prepare 1 fresh bitter leaf after it is pounded. Put it in half a glass of water, then strain the dregs and you can drink the bitter leaf concoction.</li> <li>- Grind the bitter leaf, then compress it on the forehead.</li> </ul>
2.	<i>Mamangkokan</i>	<ul style="list-style-type: none"> <li>- Treating wounds</li> <li>- Smooth digestion</li> <li>- Maintain healthy bones, eyes and hair</li> <li>- Prevents anemia and improves blood circulation</li> </ul>	<ul style="list-style-type: none"> <li>- Take a few leaves, then grind it and apply the juice to the wound.</li> <li>- To relieve leaf pain and smooth urination, the leaves are put in warm water and then applied to the body.</li> </ul>
3.	<i>Meniran</i>	<ul style="list-style-type: none"> <li>- Treat rheumatism</li> <li>- Overcoming kidney stone disease</li> <li>- Lowering high blood</li> <li>- Treating jaundice and liver</li> <li>- Overcoming skin diseases</li> <li>- Overcoming blood sugar levels</li> </ul>	<ul style="list-style-type: none"> <li>- For drugs taken, dry <i>meniran</i> herbs or fresh herbs. Then, the boiled water is drunk.</li> <li>- Mash fresh <i>meniran</i> herbs, then squeeze. The collected water is drunk. For external use, wash fresh herbs, then grind until smooth. Dab the material on the sore spot, then bandage it.</li> </ul>
4.	Moringa	<ul style="list-style-type: none"> <li>- Lowers blood sugar levels</li> <li>- Reduce inflammation</li> <li>- Lowers cholesterol</li> <li>- Lose weight</li> <li>- Supports brain health</li> </ul>	<ul style="list-style-type: none"> <li>- Moringa leaves are often used by ancient people is to brew it like tea.</li> <li>- Used as fresh vegetables but must be eaten immediately and not more than 4 hours after picking.</li> <li>- Made into vegetable soup.</li> </ul>
5.	Gardenia	<ul style="list-style-type: none"> <li>- Overcoming diabetes mellitus</li> <li>- Smooth digestion</li> <li>- Treat canker sores</li> <li>- Reduce drunken fever</li> <li>- Treat burns and ulcers</li> </ul>	<ul style="list-style-type: none"> <li>- Smoothed then smeared (for external wounds).</li> <li>- Put in warm water then drink.</li> <li>- Boiled then dripped (thrush).</li> <li>- Boiled then drink the water.</li> </ul>
6.	<i>Babadotan</i>	<ul style="list-style-type: none"> <li>- Overcoming gout</li> <li>- Overcoming eye disease</li> <li>- Overcoming cysts, bleeding, uterine tumors</li> <li>- ward off diabetes</li> <li>- Inflammation of the ear</li> <li>- Treating stomach</li> <li>- Treating wounds and scabs</li> </ul>	<ul style="list-style-type: none"> <li>- Mash then smeared on the external wound.</li> <li>- Boil the leaves and then drink the water.</li> <li>- Boil the leaves then the water is dripped onto the sore ear.</li> <li>- Mash the leaves and then put it on the eye that hurts.</li> </ul>
7.	Syntrong	<ul style="list-style-type: none"> <li>- Treat fever</li> <li>- Treating inflammation of the tonsils</li> <li>- Treating eczema</li> </ul>	<ul style="list-style-type: none"> <li>- Consumed as fresh vegetables.</li> <li>- Boiled as a vegetable.</li> <li>- Boiled then drink the water.</li> </ul>
8.	Gotu Kola	<ul style="list-style-type: none"> <li>- Improve brain function and memory</li> <li>- Reduces anxiety disorders</li> <li>- Improve blood circulation, Disguise stretchmarks and wounds</li> <li>- Relieves joint pain</li> </ul>	<ul style="list-style-type: none"> <li>- Boil the leaves then drink the water.</li> <li>- Steamed then used as fresh vegetables.</li> </ul>
9.	<i>Takokak</i>	<ul style="list-style-type: none"> <li>- Increase endurance, overcome diabetes, prevent stroke and heart</li> <li>- Overcoming inflammation</li> <li>- Overcoming osteoporosis and joint pain</li> <li>- Overcoming erectile dysfunction, improving digestion, treating kidney disease, treating flu</li> <li>- Treating anemia</li> </ul>	<ul style="list-style-type: none"> <li>- Boil with water then drink the water.</li> <li>- Pounding the leaves and then smeared on boils.</li> <li>- Wash the roots then boil and then drink.</li> <li>- Eat as fresh vegetables.</li> </ul>
10.	Soka Leaf	<ul style="list-style-type: none"> <li>- Relieves stress and soothes uterine muscles</li> <li>- Treat diarrhea</li> <li>- Increase appetite</li> </ul>	<ul style="list-style-type: none"> <li>- Soka stem bark is crushed into a paste and then rubbed on the painful body part.</li> <li>- Crush the Soka flower then mix it with water to treat bleeding.</li> </ul>



		<ul style="list-style-type: none"> <li>- Stops bleeding</li> <li>- Overcoming cramps and inflammation in the body</li> </ul>	<ul style="list-style-type: none"> <li>- Boil then drink <i>Soka</i> leaves for digestive problems.</li> </ul>
11.	<i>Kumis Kucing</i>	<ul style="list-style-type: none"> <li>- Prevent high blood</li> <li>- Treating the kidneys</li> <li>- Treat rheumatism</li> <li>- Prevents urinary tract</li> <li>- Overcoming whiteness</li> <li>- Relieve cough</li> <li>- Body detox</li> </ul>	<ul style="list-style-type: none"> <li>- Boil with water then drink.</li> <li>- Mixing <i>kumis kucing</i> leaves with some other leaves such as reeds, <i>meniran</i> or vile shard leaves to get maximum benefits.</li> </ul>
12.	<i>Tapak Dara</i>	<ul style="list-style-type: none"> <li>- Relieve stress</li> <li>- Overcoming cough and cold</li> <li>- Overcoming high fever</li> <li>- Treat boils, ulcers, and goiter</li> <li>- Overcoming insomnia</li> </ul>	<ul style="list-style-type: none"> <li>- Wash the leaves with running water.</li> <li>- Boil with 3 cups of water until the water is only half. Strain, then drain.</li> </ul>
13.	<i>Mahkota Dewa</i>	<ul style="list-style-type: none"> <li>- Treating flu and cough</li> <li>- Relieves headaches</li> <li>- Lowers cholesterol</li> <li>- Increases vitality in men</li> <li>- Detox toxins in the body</li> <li>- Reduces the risk of cancer and tumors</li> <li>- Treating eczema and fungus</li> </ul>	<ul style="list-style-type: none"> <li>- Tea decoction of the stem of the <i>mahkota dewa</i>: take the skin from the stem that has been washed clean, then dry and boil.</li> <li>- Puree the leaves of the <i>mahkota dewa</i> by pounding then smeared on the skin affected by eczema or fungus.</li> <li>- <i>Mahkota dewa</i> fruit tea: thinly slice the fruit. But must remove the seeds first, dry and then brew.</li> </ul>
14.	<i>Handeulelum</i>	<ul style="list-style-type: none"> <li>- Treat stomach ulcers</li> <li>- Relieves gout pain</li> <li>- Treat earache</li> <li>- Prevent and treat constipation</li> <li>- Treating hemorrhoids</li> <li>- Relieves fever</li> <li>- Cure boils</li> <li>- Crushing gallstones</li> <li>- Treat bruises</li> <li>- Launch the menstrual cycle</li> <li>- Smooth urination</li> </ul>	<ul style="list-style-type: none"> <li>- Boil the leaves and drink the water.</li> <li>- Apply coconut oil on the surface of the leaves enough, then roast on the fire. Put in a warm state on the boil.</li> <li>- Mash 1-2 leaves until smooth, then apply on the part that hurts rheumatism until it disappears.</li> </ul>
15.	Chinese Castor Leaves	<ul style="list-style-type: none"> <li>- Heal wounds</li> <li>- Heal wounds</li> <li>- Prevents keloids</li> <li>- Fades scars</li> <li>- Increase the rate of HB</li> <li>- Cures itching</li> <li>- Cures headaches</li> </ul>	<ul style="list-style-type: none"> <li>- Prepare a few pieces of fresh Chinese castor leaves. After washing, mash until smooth. When pounded, liquid will come out. This fluid is then wrapped around the wound.</li> <li>- Prepare a few pieces of Chinese castor leaves, then mash until the liquid comes out. After that, drip enough scrub to taste. The addition of a scrub that contains this essential oil is intended to open the pores of the skin so that the liquid of Chinese castor leaves can penetrate into it. Once mixed, apply to the part of the body that feels bruised or shaky.</li> </ul>
16.	<i>Binahong</i>	<ul style="list-style-type: none"> <li>- Prevent heart disease</li> <li>- Treat burns</li> <li>- Treat ulcers</li> <li>- Treat gout</li> <li>- Prevent cancer</li> <li>- Prevent diabetes</li> <li>- Treat anemia</li> <li>- Restores stamina</li> </ul>	<ul style="list-style-type: none"> <li>- Boil with water and then drink.</li> <li>- <i>Binahong</i> leaves can be used as a pasta ointment.</li> <li>- Brew <i>binahong</i> leaves as tea.</li> </ul>
17.	<i>Suji</i> Leaves	<ul style="list-style-type: none"> <li>- Overcome respiratory problems, especially cough</li> <li>- Gain weight by increasing appetite</li> <li>- Nourishes hair and makes it healthy</li> <li>- Overcome the fungus</li> <li>- Helps cure dysentery can overcome hypokalemia dysentery</li> <li>- Lowers cholesterol</li> </ul>	<ul style="list-style-type: none"> <li>- As a traditional medicine, <i>suji</i> leaf juice is widely used to treat respiratory problems.</li> <li>- <i>Suji</i> leaves are pounded then add water for toothache.</li> </ul>

		<ul style="list-style-type: none"> <li>- Lowers the risk of preeclampsia</li> <li>- Treat toothache</li> </ul>	
18.	<i>Lampuyang</i>	<ul style="list-style-type: none"> <li>- Anti -allergic</li> <li>- Speed up digestion</li> <li>- Relieves headaches</li> <li>- Anticancer</li> <li>- Relieves fever</li> </ul>	<ul style="list-style-type: none"> <li>- Boil the rhizome of <i>lampuyang</i> and drink the water.</li> <li>- Can be cleaned and eaten directly or used as a cooking seasoning.</li> </ul>
19.	Turmeric/ <i>Temula wak</i>	<ul style="list-style-type: none"> <li>- Increases endurance</li> <li>- Neutralizes toxins</li> <li>- Relieves pain</li> <li>- Antibacterial</li> <li>- Prevents fattening in liver cells</li> <li>- Antioxidants Lower cholesterol</li> <li>- Lowers triglycerides or fats that are found in the blood</li> <li>- Increase breast milk production in breastfeeding mothers</li> </ul>	<ul style="list-style-type: none"> <li>- Made as an herbal medicine by being grated or dried.</li> <li>- Used as a food mixture.</li> </ul>
20.	<i>Jawer Kotok/Miana Leaves</i>	<ul style="list-style-type: none"> <li>- Treat hemorrhoids</li> <li>- Treat boils</li> <li>- Cures fever and lowers heat</li> <li>- Cures and relieves cough symptoms</li> </ul>	<ul style="list-style-type: none"> <li>- <i>Miana</i> leaves are boiled and then drink the boiled water.</li> <li>- <i>Miana</i> leaves are moistened and chopped then glued to the eyes.</li> </ul>
21.	Lemongrass	<ul style="list-style-type: none"> <li>- Regulate high blood pressure</li> <li>- Burn fat</li> <li>- Cure the flu</li> <li>- Relieves menstrual pain</li> </ul>	<ul style="list-style-type: none"> <li>- Lemongrass is cleaned, chopped and then boiled, then drink the boiled water.</li> <li>- Chopped lemongrass is then mixed into food.</li> </ul>
22.	White Turmeric	<ul style="list-style-type: none"> <li>- Increases endurance</li> <li>- Prevent cancer</li> <li>- Contains anti -inflammatory</li> </ul>	<ul style="list-style-type: none"> <li>- Can be consumed directly after cleaning.</li> <li>- Can be boiled and then drink the boiled water.</li> </ul>
23.	<i>Brotowali</i>	<ul style="list-style-type: none"> <li>- Treat rheumatism</li> <li>- Lower fever</li> <li>- Reduces the risk of diabetes</li> <li>- Reduces blood sugar levels</li> <li>- Treat itching or antiseptic external wounds</li> </ul>	<ul style="list-style-type: none"> <li>- Brotowali can be used as an herbal medicine.</li> <li>- Brotowali decoction can be drunk or can be used for external wounds by being applied.</li> </ul>
24.	<i>Kenikir</i>	<ul style="list-style-type: none"> <li>- Prevent and treat diabetes</li> <li>- Prevent cancer</li> <li>- Prevent hypertension</li> <li>- Prevent ulcers</li> <li>- Increases the body's immunity</li> <li>- Maintain bone health</li> </ul>	<p>You can boil <i>kenikir</i> leaves first and then make vegetables or you can also use the boiled water of <i>kenikir</i> leaves to make a drink.</p>
25.	<i>Dayak Onions</i>	<ul style="list-style-type: none"> <li>- Treat diabetes</li> <li>- Lowers cholesterol levels</li> <li>- Prevent cancer and heart disease</li> <li>- Control high blood pressure</li> <li>- Treat kidney stones</li> </ul>	<ul style="list-style-type: none"> <li>- The benefits of <i>Dayak</i> onions can be obtained by consuming them fresh for treatment, that is, by cleaning, slicing and then boiled and drinking boiled water.</li> <li>- <i>Dayak</i> onions are washed, chopped and then dried. The dried onions are then brewed with warm water and drunk.</li> </ul>
26.	Taro Leaves	<ul style="list-style-type: none"> <li>- Heals diarrhea</li> <li>- Heart health</li> <li>- Healthy eyes</li> <li>- Overcome fatigue</li> </ul>	<ul style="list-style-type: none"> <li>- Taro leaves can be cooked to make gravy and only the young stems are taken which have a sweet, spicy and neutral taste. This taro leaf plant also produces tubers that can also be cooked like cassava that is boiled.</li> <li>- Take taro root, cleaned, ditim and drink the water while warm.</li> </ul>
27.	Red Betel	<ul style="list-style-type: none"> <li>- Treating coronary heart disease</li> <li>- Antiseptic and treats body odor</li> <li>- Treat bronchitis</li> <li>- Treat cough</li> <li>- Treat bleeding gums</li> <li>- Treat itching</li> </ul>	<ul style="list-style-type: none"> <li>- Boil 20-30 pieces of red betel leaves. Use this decoction of red betel leaves for bathing.</li> <li>- Boil red betel leaves and then drink.</li> </ul>

#### 4. CONCLUSION

Old Sundanese manuscripts as a legacy of the past, are important and need to be informed of their current existence, because there are still many Sundanese manuscripts whose contents have not been revealed, especially those related to traditional medicines, treatment secrets, as well as procedures, and treatment actions, which are still used by indigenous peoples in West Java and Baduy. By consuming medicinal plants through the correct dosage, use, method, and treatment, at least it can increase the body's resistance to ward off viruses, germs, and bacteria that enter the body. Through the socialization and implementation of traditional medicinal plants, it is hoped that the community will be wise in sorting and choosing medicinal plants, so that they are effective and on target. The results of this study are not only useful for the field of philology, but can also be used by the fields of medicine, pharmacy, public health, dentistry, nursing, as well as agriculture, libraries, archives, and communications.

The types of medicinal plants found in the treatment script used to prevent the Covid-19 pandemic are as stated in the FROTI guidelines. In addition, there is no adequate information in the treatment text regarding the suitability of how to identify the type of medicinal plant, how to use it & side effects as described in FROTI, because there has been no specific research on this matter.

#### 5. SUGGESTION

The authors believe that research is still needed on public knowledge on the safe use of medicinal plants. In addition, continuous and sustainable research is also needed on traditional medicinal plants, both those in the Sundanese script and the Nusantara script. In addition, it is also necessary to conduct research that prioritizes the effectiveness and safety of medicinal plants, with a priority of plants that are useful for epidemiologically occurring diseases in an area, plants that are useful for preventing disease and for improving public health.

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