# Pre-Marketing Analysis of Segmenting, Targeting, and Positioning for Black Pule (*Alstonia spectabilis*) Antimalarial Tablets in South Central Timor Regency

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## ABSTRACT

Black pule (*Alstonia spectabilis*) antimalarial tablets have the potential to serve as effective herbal medicines; however, their utilization remains limited. A strategic Segmenting, Targeting, and Positioning (STP) approach is essential to support downstream product development, reach the appropriate market segments, and promote pharmaceutical self-sufficiency in malaria-endemic regions such as South Central Timor District. This study aims to identify market segments, evaluate those with the highest potential, and establish effective product positioning. A descriptive quantitative method was employed, involving 100 respondents aged 18–65 years selected through cluster sampling across three high-malaria-incidence subdistricts. Data were analyzed using a Two-Step Cluster, K-means clustering, and cross-tabulation. The analysis revealed two distinct consumer segments: (1) experienced users of herbal antimalarial remedies and (2) inexperienced but highly interested individuals. The targeting applied was a Differentiated Marketing Strategy, positioning the product as a safe, high-quality, and scientifically validated herbal antimalarial effective in reducing *Plasmodium falciparum* parasitemia. The findings indicate that with proper market segmentation and targeted positioning, black pule tablets hold significant market potential in the South Central Timor District and can enhance consumer trust, awareness, and long-term loyalty.

**Keywords:** *Alstonia spectabilis*; antimalarial tablet; positioning; segmenting; targeting.

## INTRODUCTION

Malaria is still a health problem in many parts of the world. Malaria is an infectious disease caused by plasmodium parasites that multiply in human red blood cells with the main cause being female anopheles (Ocvanirista et al., 2024). Based on the World Health Organization malaria report in 2022 there were 249 million people infected with malaria and as many as 608,000 people were declared dead (WHO, 2023). Meanwhile, Indonesia also still has a number of malaria cases, according to the Ministry of Health, the number of malaria cases has increased in Indonesia in 2020 there were

254,055 cases to 443,530 cases in 2022. Malaria is the main infectious disease that occurs in the eastern region which includes Papua, West Papua and East Nusa Tenggara (NTT) (Taek, 2023).

East Nusa Tenggara is one of the target areas for malaria elimination to achieve the national elimination program by 2030. One of the districts of East Nusa Tenggara (NTT) that has not been free from malaria cases is South Central Timor (TTS) (Inderiati et al., 2022). South Central Timor District is not yet free from malaria cases, namely in 2023 there were 696 positive cases of malaria with 1.53 API (Annual Parasite Incidence). API which is classified as moderate endemicity (Santos et al., 2023).

One of the drugs used to prevent and treat *Plasmodium sp*. is chloroquine. However, the use of chloroquine is starting to be abandoned due to the resistance of *Plasmodium sp*. to this quinine-derived compound. As an alternative, artemisinin and its derivatives, such as artesunate, isolated from Artemisia annua, are now the main options (Taek et al., 2021). However, recent reports indicate the emergence of resistance of *Plasmodium falciparum*, the most dangerous plasmodium species in Indonesia, to artesunate combination therapy with mefloquine, with cases of resistance reported in Korea (Taek, 2020). Therefore, new antimalarial drugs that are effective and affordable by the community are needed.

The black pule plant (*Alstonia spectabilis*), known as *kroti metan* by the Tetun ethnic group, is a traditional plant with potential for development as an antimalarial agent. Previous studies have investigated the antimalarial properties of *Alstonia spectabilis*. Metabolite profiling test of black pule (*Alstonia spectabilis*) extract using *ultra performance liquid chromatography–quadrupole time-of-flight mass spectrometry* (UPLC-QToF-MS/MS) and *gas chromatography* (GC-MS) identified the presence of *macralstonidine*, *pleiocarpamine*, and *villalstonine* compounds with antimalarial potential. *In vitro* testing of the 70% ethanol extract of *Alstonia spectabilis* demonstrated antimalarial activity by inhibiting *Plasmodium* growth with an $LC_{50}$ value of 1.23 µg/mL(Taek et al., 2021). *In vivo* testing also showed that the 70% ethanol extract of black pule (*Alstonia spectabilis)* inhibited the growth of *Plasmodium berghei* in mice at an optimal dose of 0.4914 mg/20g body weight/day (Taek, 2023).

So it is necessary to develop downstream made from black pule to be used as tablets in supporting national pharmaceutical independence through the availability, quality, and affordability of local products (Saputra et al., 2022). To support product downstreaming, product commercialization is necessary through marketing strategies. Companies are required to be more creative in developing marketing strategies and appropriate products so that they can be accepted by consumers and increase purchase intention (Maulina et al., 2025). This, in turn, supports the increase in product value by representing the unique characteristics of flagship products and expanding market share (Tedjalaksana and Trimo, 2022).

An optimal marketing strategy requires structured planning, both internally and externally. Before running a promotion, the company must set a clear target market. Many businesses fail because they are unable to identify and analyze the market properly. Given the diverse consumers, companies must choose the right segment to achieve marketing success (Aliami et al., 2022).

One of the right marketing strategy approaches is Segmenting, Targeting, and Positioning (STP) (Handayani et al., 2023). Segmenting, Targeting, and Positioning (STP) analysis helps understand consumer characteristics and determine effective marketing strategies (Aliami et al., 2022). This strategy provides various benefits for companies to identify market opportunities, allocate resources efficiently, and build a positive brand image, which is important for increasing awareness and influencing purchasing decisions in a competitive market (Sani and Aslami, 2022). Therefore, this study aims to determine the number of segments with similar characteristics based on demographic, psychographic

and behavioral segments, identify segments that have the highest profit potential and determine target market strategies and determine effective positioning for black pule (*Alstonia spectabilis*) antimalarial tablets in South Central Timor District.

## METHODS

This research method was designed using a quantitative descriptive method to understand the market for black pule (*Alstonia spectabilis*) antimalarial tablets in South Central Timor. This study used a questionnaire as a data collection tool. The questionnaire was designed to explore information related to the preferences, habits, and beliefs of respondents which will be used as a suitable potential for marketing black pule (*Alstonia spectabilis*) antimalarial tablets. This study was approved by the Ethics Committee for Health Research, Islamic University Hospital Malang with letter number 36/KEPK/RSI U/IX/2024.

### 1.    Materials and Instrumentations

The instruments used in this study include Microsoft Excel and IBM SPSS Statistics version 24. A questionnaire instrument was used to collect data from respondents. Microsoft Excel was used to input the data obtained from the questionnaires. Meanwhile, IBM SPSS Statistics version 24 was used to classify and process the research data obtained from the questionnaires, allowing for the formation of groups based on similarities. The materials used in this study were questionnaire sheets and pens for data collection.

### 2.    Location, Time and Research Sample

This research was conducted in South Central Timor District, East Nusa Tenggara in September 2024. The number of respondents in this study was 100 respondents (**Table 1**) with inclusion criteria for respondents aged 18 years - 65 years, respondents can communicate well and answer the questionnaire, and are willing to fill out the research instrument questionnaire. The exclusion criteria for respondents are that they are not willing to fill out questionnaires for researchers. The location of this study was determined purposively by selecting 3 sub-districts in South Central Timor District which were selected using cluster sampling technique. The three sub-districts were SoE City Sub-district, South Amanuban Sub-district, and Boking Sub-district, which were selected based on the highest malaria incidence areas in 2019. So that the three sub-districts were chosen as data sampling sites with endemicity that is still quite high and based on the most malaria cases. It is expected that the people of South Central Timor District will be suitable for segmenting, targeting and positioning marketing for black pule antimalarial tablets.

**Tabel 1:** Distribution of Sample Number of Respondents Based on Domicile

| District | Number of Respondents | Percentage |
|---|---|---|
| Kota SoE | 54 | 54% |
| Amanuban Selatan | 32 | 32% |
| Boking | 14 | 14% |
| **Total** | **100** | 100% |

### 3.    Data Analysis

### 3.1    Validity test

Validity test is a measuring tool used to prove the accuracy of the items in the research instrument and measure the clarity of the framework in a study. The instrument to be used in research must have been declared valid and reliable. Indicators in each instrument are said to be valid if the value of r count is greater than r table (Utami et al., 2023).

### 3.2    Reliability Test

Reliability test is the consistency of a series of measurements or a series of measuring instruments. This can be in the form of measurements from the same measuring instrument (test with retest) will give the same results, or for more subjective measurements, whether two raters give similar scores (inter-rater reliability). Reliability is not the same as validity. Reliability means that a reliable measurement will measure consistently, but not necessarily measure what should be measured (Sanaky et al., 2021).

### 3.3    Segmenting, Targeting, Positioning Analysis

Segmentation data analysis uses Two-step cluster testing to determine the number of segments to be divided based on the similarity of answers to demographic, psychographic, and behavioral segment questions. After knowing the number to be divided, K-Means cluster testing is carried out to divide the number of segments according to the results of the Two-step cluster to determine the number of members in each segment. After that, a crosstabulation analysis was conducted to get a clear interpretation with the percentage results of each segment. The results of this analysis are used to determine segmenting based on demographic segments, namely age, gender, psychographic segments, namely lifestyle and values, and behavioral segments, namely knowledge, use, attitudes, and responses. Furthermore, targeting analysis to evaluate segments and select potential target markets from segmentation results. This research uses a Differentiated Marketing Strategy, in which the company adjusts the marketing program for each segment by meeting different characteristics (Manggu and Beni, 2021). And finally, determining positioning aims to instill product advantages in the minds of consumers in the target segment with a consumer group and benefit-based approach, according to the behavioral characteristics of the intended market.

### RESULTS AND DISCUSSION

### 1.    Validity Test Results

The validity test was carried out testing 11 question items consisting of indicators of lifestyle, values, knowledge, responses, use and attitudes towards products. Meanwhile, the age and gender indicators were not tested for validity because only demographic data was objective. Validity testing of the questionnaire can be said to be valid if the r-count> r-table value is 0.361. The value of r table is known from the distribution value of 5% significance with 30 respondents. So that in the validity test in **Table 2** obtained the validity test results that all items are valid so that they can be used in research.

**Tabel 2:** Validity Testing Results

| Indicator | Questions | r-count | r-table | Description |
|---|---|---|---|---|
| Life Style | Q3 | 0,800 | 0,361 | Valid |
| Value | Q4 | 0,720 | 0,361 | Valid |
| Knowledge | Q5 | 0,540 | 0,361 | Valid |
| Responses | Q6 | 0,623 | 0,361 | Valid |
| Usage | Q7 | 0,501 | 0,361 | Valid |
| | Q8 | 0,502 | 0,361 | Valid |
| | Q9 | 0,477 | 0,361 | Valid |
| | Q10 | 0,515 | 0,361 | Valid |
| Attitude Toward the Product | Q11 | 0,722 | 0,361 | Valid |
| | Q12 | 0,527 | 0,361 | Valid |
| | Q13 | 0,744 | 0,361 | Valid |

## 2. Reliability Test Results

Reliability testing was carried out by testing 11 question items with Cronbach's Alpha on the questionnaire. The reliability test was carried out to determine whether all question items used in the questionnaire were reliable or not. The reliability test results in **Table 3** that all items are reliable. A research instrument is said to be reliable if the Cronbach's Alpha value is> 0.60 (Slamet and Wahyuningsih, 2022).
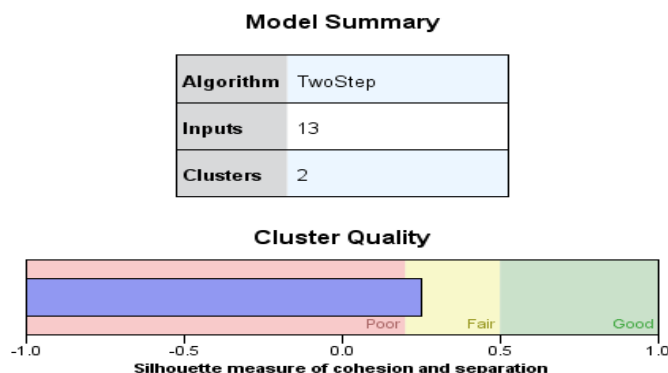
**Tabel 3:** Reliability Testing Results

| Cronbach's Alpha | N of Item | Requirement | Information |
|---|---|---|---|
| 0.825 | 11 | >0.60 | High Reliable |

## 3. Segmenting Analysis Results

Segmenting testing is carried out first clustering testing to divide respondents into several small groups that have similar or the same criteria. The clustering method can be used to group data that has similarities between one data and another (Herlinda et al., 2021). Clustering testing is carried out using Two-step cluster to determine the number of segments formed based on the similarity and similarity of criteria. The two-step cluster method is a method that is considered the most suitable for clustering this data so that we can find out the optimal cluster or segment solution based on company performance (Putri and Wulandari, 2023).

The Two-step cluster test results (**Figure 1**) and (**Table 4**) show that two small segments are formed that have similarity criteria and similar characteristics. The quality of the Two-step cluster results generated from the test is included in a fairly good level, so that it can be used further, namely conducting K-Means clusters to divide the similarity of respondents into small groups according to the number of Two-step cluster results, namely two segments to determine the number of members of each segment. The K-Means clustering method is a non-hierarchical data clustering technique that separates data into clusters, groups data with the same features together and groups data with different characteristics into different groups (Amalina et al., 2024).

**Model Summary**

| Algorithm | TwoStep |
|-----------|---------|
| Inputs | 13 |
| Clusters | 2 |

**Cluster Quality**



Silhouette measure of cohesion and separation

**Figure 1.** Two-step Cluster Testing Results

**Table 4:** K-Means Cluster Testing Results

| Segment | Number |
|---------|--------|
| 1 | 66 |
| 2 | 34 |
| Valid | 100 |
| Mising | 0 |

The results of K-Means cluster testing show that there are 66 respondents who are members of the first segment and have the same criteria among respondents, then in the second segment there are 34 respondents who have the same criteria. After knowing the results of the formation of the number of members in each segment, then proceed with conducting a crosstabulation test of the segment to find out more details about the information and percentage of each segment. Then, the highest percentage response for each indicator in each segment was selected, resulting in the **Table 5**.

**Table 5:** Segmenting Results Segment Characteristics

| Characteristic | Segment | |
|----------------|---------|---|
| | **First Segment** | **Second Segment** |
| Age | 18-25 Years | 18-25 Years |
| Gender | Female | Female |
| Medicine Preference | Strongly Prefer Herbal Medicine | Prefer Herbal Medicine |
| Main Reason for Buying Herbal Medicine | Product Quality | Product Safety |
| Source of Information on Herbal Medicine | Family/Friends | Social Media |
| | Doctor/Health Professionals | Doctor/Health Professionals |
| Willingness to Try New Products from Doctors | Very Willing | Willing |
| Malaria Prevention Measures | Using Antimalarial Medicine | Using Mosquito Repellent |
| Usage and Frequency of Herbal Antimalarial | Ever Used, 2 Times | Never Used |
| Source of Herbal Antimalarial Medicine | Pharmacy | Never Used |
| Experience with Branded Herbal Medicine | Used, But Forgot the Brand | Never Used |
| Interest in Trying New Herbal Antimalarial | Very Interested | Interested |
| Belief in No Side Effects of Herbal Medicine | Not Sure | Sure |
| Belief in Efficacy of Herbal Medicine | Very Sure | Sure |

### 4.    Targeting Analysis Results

Targeting or target market is defined as the process of evaluating the attractiveness of segments that have been analyzed and selecting segments that are the main targets of marketing strategies (Robbani, 2024). In this study, the targeting approach used for marketing black pule (*Alstonia spectabilis*) antimalarial tablets is Differentiated Marketing Strategy. This strategy allows companies to customize products and marketing for each segment, thus reaching more customers (Rosyida et al., 2020). This approach also supports different marketing programs according to the characteristics of each customer group (Manggu and Beni, 2021).

Based on **Table 6** The determination of the target market for black pule (*Alstonia spectabilis*) antimalarial tablets did not consider age and gender factors due to disproportionate sample distribution. Therefore, the targeting analysis focused more on psychographic and behavioral approaches to identify potential and relevant market segments. Psychographically, both segments showed a lifestyle preference for herbal medicine over synthetic drugs. The preference for a natural lifestyle towards herbal medicine is a great potential for black pule (*Alstonia spectabilis*) antimalarial tablets when it will be marketed in large quantities. This is because the alignment of consumer preferences can influence purchasing decisions, especially when the products offered match their values and beliefs (Smith et al., 2021).

**Table 6:** Results of Analysis of Characteristics of Each Segment to Be Targeted

| Indicator | Characteristics Segment | |
| --- | --- | --- |
| | **First Segment** | **Second Segment** |
| Age | 18-24 Years | 18-24 Years |
| Gender | Female | Female |
| Life Style | Have a strong preference for herbal medicine | Have a preference for herbal medicine |
| Value | The main consideration in buying herbal medicine is due to the quality of medicinal products | The main consideration in buying herbal medicine is due to drug safety |
| Knowledge | Get sources of information on herbal medicines through family/friends and doctors/health workers | Get sources of information on herbal medicines through social media and doctors / health workers |
| Response | Very willing to try new products recommended by doctors/health workers | Willing to try new products recommended by doctors/health workers |
| Usage | Use antimalarial herbal medicine in preventing malaria, have used antimalarial herbal medicine 2 times by getting it through the pharmacy and have used branded herbal medicine forgot about the brand | Use mosquito repellent to prevent malaria, never use antimalarial herbal medicine and branded antimalarial herbal medicine, never get antimalarial herbal medicine |
| Attitude Toward the Product | Very interested in new antimalarial herbal medicines, not sure there are no side effects and very sure herbal medicines have efficacy | Interested in new antimalarial herbal medicines, believe there are no side effects and believe herbal medicines have efficacy. |

The first segment chooses herbal medicine because of product quality, while the second segment prioritizes safety. The focus on quality and safety is expected to strengthen product positioning because black pule (*Alstonia spectabilis)* antimalarial tablets have met CPOTB standards and passed toxicity tests on the extract, which is a guarantee of quality and safety. The quality and safety of herbal medicines have proven to be important factors in purchasing decisions (Anggreini and Suwitho, 2020). Research

findings by Yuwanda et al (2025) show that consumers tend to choose herbal medicines that are considered safe (Yuwanda et al., 2025).

In terms of knowledge, the first segment obtained information about herbal medicines from family, friends, and health workers. Trust in this source of information can form positive perceptions and encourage the use of herbal products because of the benefits that are felt directly (Adiyasa and Meiyanti, 2021). Marwati and Amidi's (2019) research findings that perception and trust influence herbal medicine decisions (Marwati and Amidi, 2019). Meanwhile, the second segment gets information from social media and health workers, so the promotional strategy for black pule (*Alstonia spectabilis*) antimalarial tablets can be focused on collaboration between digital media and health professionals before being marketed or to be marketed in large quantities. Social media has become an effective tool for expanding access to information and increasing trust in herbal products (Alifiyah et al., 2021). In terms of response to new products, both segments showed willingness to try new products if they received recommendations from health workers. This is an important opportunity for black pule (*Alstonia spectabilis*) antimalarial tablets because it is a new product with support from health workers who can strengthen the adoption of health worker research-based products, especially in the face of the many resistances to synthetic drugs (Wulandini, et al., 2024).

In terms of use, the first segment showed a habit of using antimalarial herbal medicine, getting medicine from pharmacies, and having tried a brand of herbal medicine even though they forgot the name. This reflects the acceptance of herbal medicine and is a strategic target for introducing a new product brand, namely black pule (*Alstonia spectabilis*) antimalarial tablets. Brand strengthening is important because it can increase purchase interest and differentiate the product in the market (Fabella et al., 2023). Distributing through pharmacies is the company's main strategy to reach consumers, increase trust, and accessibility of black pule (*Alstonia spectabilis*) antimalarial tablet products (Dysyandi et al., 2019). So that black pule antimalarial tablets (*Alstonia spectabilis)* will also be marketed through pharmacies for drug distribution. Pharmacies were chosen because they are dominant in pharmaceutical distribution and are easily accessible to the public, supporting optimal health services (Yunarti et al., 2024).

By fulfilling needs according to the characteristics of their preferences and habits, it can improve effective marketing strategies. Marketing strategies are more effective if they are tailored to the preferences and habits of the target segment (Santoso et al., 2024). In contrast, the second segment has never used antimalarial herbal medicine and has never obtained it from a health distribution point. However, this segment has great potential as it is inexperienced in the use of antimalarial herbal medicines and is still open to education.

Although the second segment has measures to prevent malaria using mosquito repellent. This is still an opportunity for black pule (*Alstonia spectabilis*) antimalarial tablets. Although the second segment already uses mosquito repellent, there is still an opportunity for black pule tablets. According to Sari et al (2023), people are reluctant to try other alternatives due to the cost and availability of conventional mosquito repellent (Sari Sir et al., 2023). Therefore, a more affordable pricing strategy and education on the long-term economic benefits can be an effective way to attract them. Wider distribution and community-based approaches as well as online media in the second segment can strengthen market penetration, given that digital marketing can increase trust, loyalty and brand visibility in the community (Merrynda & Andriani, 2023; Manik, et al., 2024).

Based on attitudes towards the product, both segments have an interest in new antimalarial herbal medicines and believe in their efficacy. This makes the potential for black pule (*Alstonia spectabilis*) antimalarial tablets, which include new antimalarial herbal medicines, to enter the market competition and also as an alternative in the treatment of malaria, this is because synthetic antimalarial drugs cause resistance. Although the first segment is still hesitant regarding side effects, while the second segment is more confident of its safety, this still opens up opportunities because herbal medicines generally have minimal to no side effects if used appropriately Experience and trust in herbal medicines are key in forming positive perceptions that encourage consumer loyalty (Marwati and Amidi, 2019). Therefore, communication strategies that emphasize safety and efficacy need to be strengthened to build loyalty to black pule (*Alstonia spectabilis*) antimalarial tablets because trust is a factor that can significantly influence purchasing decisions (Istiyani et al., 2022) (Mubarak and Mufeeth, 2020).

Based on the number of respondents, the first segment consists of 66 members and shows more complete characteristics as a potential market. However, the second segment with 34 members is also being targeted as it still shows great opportunities for development. Both segments have interest in new herbal medicines, trust in their efficacy, and value congruence on quality and safety, making them strategic target markets for marketing black pule (*Alstonia spectabilis*) antimalarial tablets.

## 5. Positioning Analysis Results

Positioning is a strategic decision to serve a particular segment with a specially designed program according to consumer needs (Haque-fawzi et al., 2022). Strong positioning helps build a positive brand image, increase consumer awareness, and influence purchasing decisions. Companies are aware that products and promotions are not always relevant to all customers, because consumer preferences are constantly changing, thus driving competition to become the first choice for customers (Sani and Aslami, 2022).

**Table 7:** Targeted Segment Characteristics

| Indicator | Characteristic | |
|---|---|---|
| | **First Segment** | **Second Segment** |
| Life Style | Has a strong preference for herbal medicine | Have a preference for herbal medicine |
| Value | The main consideration for buying herbal medicine is the quality of the medicinal product | Main consideration for buying herbal medicine is drug safety |
| Attitude Toward the Product | Very interested in new antimalarial herbal medicines, not sure about no side effects and very confident in the efficacy of herbal medicines | Interested in new antimalarial herbal medicines, confident in the absence of side effects and confident in the efficacy of herbal medicines |

Based on **Table 7**, the characteristics table of the two target segments, both show a strong preference for herbal medicines, especially those that have high quality and are safe to use. Therefore, the right positioning for black pule antimalarial tablets is as a new herbal alternative that effectively reduces parasitemia growth, especially *Plasmodium falciparum*, with guaranteed quality and safety.

Product quality is a major factor in consumer purchasing decisions. Products with high quality will be more easily embedded in the minds of consumers and increase their willingness to pay (Anggreini and Suwitho, 2020). Quality also contributes greatly to consumer satisfaction (Munisih, and Malik, 2019). Black pule tablets are produced in accordance with the standards of the Good Manufacturing Practice of Traditional Medicines (CPOTB). Products that comply with CPOTB standards will meet the safety and quality according to their intended use (Kusnadi and Husni, 2023). In

terms of benefits, research shows that *Alstonia spectabilis* extract has strong antiplasmodial activity (IC50: 1.23 µg/mL) against Plasmodium falciparum (Taek et al., 2021), and has proven effective in vivo in reducing parasitemia in mice, even exceeding chloroquine (Taek et al., 2024). The safety of black pule tablet products in the extract is also guaranteed through toxicity tests, with an LD50 value of 7,008 mg/kgBB - classified as non-toxic (BPOM RI, 2022). The wide effective dose range indicates a high therapeutic index, so this product has a high level of safety and is safe to use.

Communicating the benefits, quality and safety of products through effective channels such as social media is essential for building trust, especially by conveying scientific evidence-based information (Bahri et al., 2023). Transparency in the production process and selection of raw materials can strengthen consumer loyalty. With positioning that emphasizes quality, safety, and scientific evidence, as well as targeted marketing strategies, black pule antimalarial tablets have the potential to gain consumer trust, expand the market, and build a strong product identity in a sustainable manner (Khairi et al., 2025).

## CONCLUSIONS

Market segmentation of black pule (*Alstonia spectabilis*) antimalarial tablets in South Central Timor District resulted in two segments, with the targeting strategy applied, namely Differentiated Marketing Strategy, which selected both segments as target markets. Both segments have a strong preference for herbal medicine and prioritize product quality and safety. The first segment has experience in using antimalarial herbal medicines, while the second segment has no experience but shows high interest in new products, so it has the potential to accept and trust the efficacy of black pule (*Alstonia spectabilis*) tablets as an antimalarial treatment. Black pule tablets are positioned as a new alternative herbal antimalarial medicine that can reduce the growth of parasitemia, especially *Plasmodium falciparum*, with guaranteed quality and safety. By conducting proper market segmentation and positioning, it is expected that black pule (*Alstonia spectabilis*) antimalarial tablets have significant market potential in South Central Timor District and can increase consumer trust, awareness and long-term loyalty.

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## CONFLICT OF INTEREST

The authors emphasize that there is no conflict of interest between the parties involved in this research. The research was conducted independently, with full freedom of design and execution. The results of the research will be published publicly, regardless of the outcome. To maintain objectivity, the authors have taken the necessary steps to minimize the possibility of bias.

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