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POSTER COMMUNICATION · PHARMACOLOGY & THERAPEUTICS

# Phytopharmaceutical and Impacts of Utilizing Piper betle leaf in Treating Leucorrhoea: Literature Review

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**KEY MESSAGES**

1. Piper betle leaves contain bioactive compounds with potential antimicrobial effects against causes of vaginal discharge.
2. Existing studies report improvements in vaginal discharge symptoms following Piper betle use.
3. Further research is needed to establish its clinical effectiveness and safety, particularly for vaginal use.

**ABSTRACT**

**Introduction.** Sirih (Piper betle) culture in Indonesia is multifaceted and encompasses various aspects such as social interaction, religious beliefs, cultural symbols, and health implications. World health organisation (2021) stated that the prevalence of vaginal discharge in women in Indonesia reaches 75% with the majority experiencing vaginal discharge at least once in their lives. In addition to that, 45% of women in Indonesia have experienced vaginal discharge more than once. P. betle has demonstrated antibacterial and antifungal activities against human pathogens. According to various studies, sirih has a beneficial impact on a woman's reproductive system. This study aims to analyze whether preserving the practice of consuming sirih is effective in treating leucorrhoea. Leucorrhea is a common complaint among women of reproductive age, it may be a physiological or pathological such as, bacterial vaginosis, gonorrhoea, vaginitis, pregnancy, etc. Various scientific databases were searched for articles related to the medicinal antimicrobial properties of P. betle.

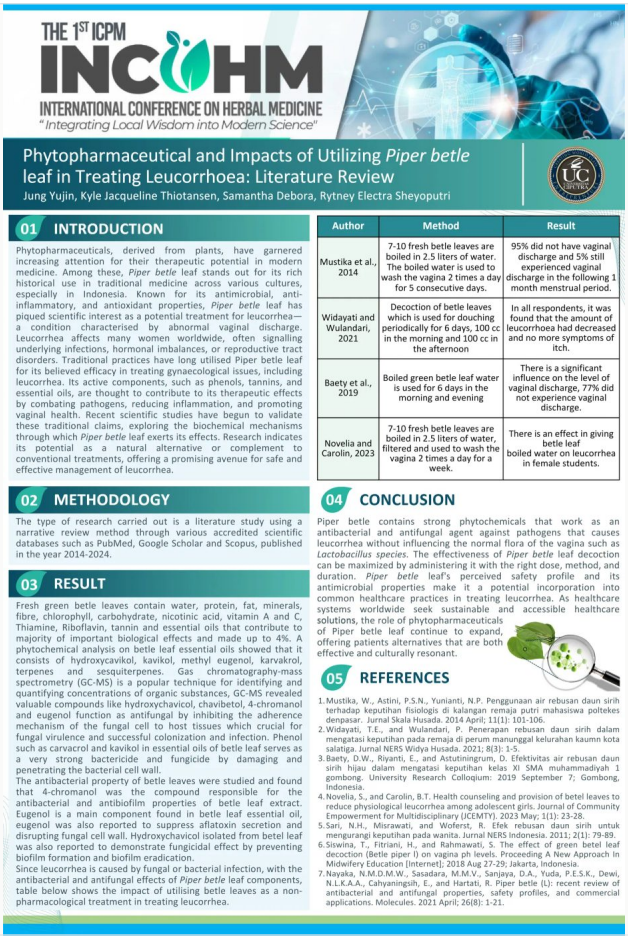
**Materials and methods.** The search engines used in this review were PubMed, Google Scholar, ScienceDirect, and Scopus, published in the year 2014-2024.

**Results.** Phytochemicals that work as antimicrobial properties found in P. betle are piperazine, flavonoids, and phenolic compounds by damaging the cell wall and cell membranes of bacteria restricting their growth, further leading to cell death and lysis. In conclusion, the practice of utilising sirih is beneficial in treating leucorrhoea due to its phytochemicals as antimicrobial properties.

**Conclusion.** In the Community view, sirih is a complete treatment for women's health. It is expected that there will be more research related to the dose of sirih herb used so that it could be developed by the local culture-based herbal medicine to support services in health facilities. This literature review suggests a strong basis for implementing the use of sirih as an alternative medicine.

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