



## Treatments used for malaria in young Ethiopian children: a retrospective study

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### Abstract

**Background:** In Ethiopia, medicinal plants have been used to treat different diseases, including malaria, for many centuries. People living in rural areas are especially noted for their use of medicinal plants as a major component of their health care. This study aimed to study treatment-seeking and prioritize plants/plant recipes as anti-malarials, in Dembia district, one of the malarious districts in Northwest Ethiopia. **Methods:** Parents of children aged under 5 years who had had a recent episode of fever were interviewed retrospectively about their child's treatment and self-reported outcome. Treatments and subsequent clinical outcomes were analysed using Fisher's exact test to elicit whether there were statistically significant correlations between them. **Results and discussion:** Of 447 children with malaria-like symptoms, only 30% took the recommended first-line treatment (ACT) (all of whom were cured), and 47% took chloroquine (85% cured). Ninety-nine (22.2%) had used medicinal plants as their first-choice treatment. *Allium sativum* (Liliaceae), *Justicia schimperiana* (Acanthaceae), *Buddleja polystachya* (Scrophulariaceae) and *Phytolacca dodecandra* (Phytolaccaceae) were the most frequently used. *Justicia schimperiana* was the one associated with the best clinical outcomes (69% self-reported cure rate). However, the difference in clinical outcomes between the plants was not statistically significant. **Conclusion:** In this study, only 30% of children took the recommended first-line treatment. 22% of children with presumed malaria were first treated with herbal medicines. The most commonly used herbal medicine was garlic, but *J. schimperiana* was associated with the highest reported cure rate of the plants. Further research is warranted to investigate its anti-malarial properties.

### Biography

Mr. Abyot Endale Gurmu has completed his MSc. in Pharmacognosy in 2012 at Addis Ababa University and his B.Pharm in 2007 from University of Gondar. Currently, he is Associate Professor of Pharmacognosy and Head of School of Pharmacy, College of Medicine and Health Sciences, University of Gondar. Mr. Abyot Endale Gurmu is currently engaged on research related to traditional natural products. He is well experienced in the area of herbal medicine and devoted to natural product research. He delivers course such as Natural Products, Pharmacognosy and Complementary and Alternative Medicine to Undergraduate Pharmacy students. Moreover, he is principal coordinator of the traditional medicine research project and initiator to establishing medicinal plant garden. He has published 13 papers in Journals of recognized international prestige.

### Publications

Zemene Demelash Kifle, Getnet Mequanint Adinew, Mestayet Geta Mengistie, Abyot Endale Gurmu, Engidaw Fentahun Enyew, Bahiru Tenaw Goshu, and Gedefaw Getenet Amare. Evaluation of Antimalarial Activity of Methanolic Root Extract of *Myrica salicifolia* A Rich (Myricaceae) Against *Plasmodium berghei*-Infected Mice. *Journal of Evidence-Based Integrative Medicine* Volume 25: 1-12 DOI: 10.1177/2515690X20920539

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Feleke Moges, Setegn Eshetie, Wondwossen Abebe, Feleke Mekonnen, Mulat Dagne, Abyot Endale, Azanaw Amare, Tigist Feleke, Mucheye Gizachew, Moges Tiruneh. High prevalence of extended-spectrum beta-lactamase-producing Gram-negative pathogens from patients attending Felege Hiwot Comprehensive Specialized Hospital, Bahir Dar, Amhara region. *PLoS ONE* 14 (4): e0215177. <https://doi.org/10.1371/journal.pone.0215177> (PMID: 30986262)

Abyot Endale Gurmu, Teresa Kisi, Habteweld Shibru, Bertrand Graz and Merlin Willcox. Treatments used for malaria in young Ethiopian children: a retrospective study. *Malar J* (2018) 17:451 <https://doi.org/10.1186/s12936-018-2605-x> (PMID: 30518377)

# Pharmacoeconomics: Open Access

Wubetu Yihunie Belay, Abyot Endale Gurmu, Zewdu Birhanu Wubneh. Antimalarial activity of stem bark of *Periploca linearifolia* during early and established Plasmodium infection in mice Hindawi Evidence-Based Complementary and Alternative Medicine Volume 2018, Article ID 4169397, <https://doi.org/10.1155/2018/4169397> (PMID: 29785191)

2<sup>nd</sup> International Conference on Alternative Medicine and Medicinal Plants  
Webinar | June 09, 2021

**Citation:** Dilip Kr. Goswami, Herbs useful in snakebite: Information from the ayurvedic classics, Medicinal Plants 2021, 2nd International Conference on Alternative Medicine and Medicinal Plants, Webinar | June 09, 2021, 2472-1042 -06: 01-07-08