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Antihypertensive Plants Used by the Anak Dalam Tribe in Jambi, Indonesia: Ethnobotanical Insights and Pharmacological Potential as Alternatives to Conventional Medicine

[Drug Design, Development and Therapy](#) • Review • Open Access • 2026 • DOI: 10.2147/DDDT.S603002 [Muhaimin, Muhaimin](#)^{a,b} ; [Lestari, Uce](#)^c; [Hirzan, Rifanza](#)^d; [Chaerunisaa, Anis Yohana](#)^e; [Khatib, Alfi](#)^f^a Department of Pharmaceutical Biology, Faculty of Pharmacy, Universitas Padjadjaran, Sumedang, 45363, Indonesia[Show all information](#)

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Abstract

Hypertension represents a significant health burden worldwide, and traditional medicinal plants historically used by indigenous communities such as the Anak Dalam tribe to manage blood pressure offer promising ethnopharmacological opportunities for developing accessible and culturally acceptable antihypertensive therapies. This review summarizes the traditional uses of 34 well-known and promising medicinal plants utilized by the Anak Dalam tribe and assesses their potential for treating hypertension-related diseases. The results revealed that nine medicinal plants used by the Anak Dalam tribe in Jambi, Indonesia, in developing antihypertensive therapies. In this study, the medicinal properties of the following species are discussed briefly, and their benefits are highlighted: turmeric (*Curcuma longa* Linn), garlic (*Allium sativum* Linn), noni (*Morinda citrifolia* Linn), lime (*Citrus aurantiifolia* (Christm.) Swingle), celery (*Apium graveolens* Linn), starfruit (*Averrhoa bilimbi* Linn), cat's whiskers (*Orthosiphon aristatus* var. *aristatus*), soursop (*Annona muricata* L), and ginger (*Zingiber officinale* Roscoe). According to the review of the literature, these plants were tested using various methods: turmeric and partially celery on male Wistar rats induced with deoxycorticosterone acetate (DOCA); garlic in a randomized clinical trial; noni with 8% NaCl and prednisone induction; lime in a heated palm oil model; bilimbi with 0.8% NaCl induction and human patients; cat's whiskers in phenylephrine-induced rats and a clinical cohort; soursop on normotensive and ethanol/sucrose/epinephrine-induced rats; and ginger by an unspecified invasive method. Data from the references suggest that the extracts reliably show notable decreases in blood pressure and adjustments in heart rate, mainly due to their elevated levels of flavonoids, phenolics, organosulfurs, coumarins, phthalides, and acetogenins compounds known for their antihypertensive effects. Although encouraging, additional studies are needed to create safe and effective pharmaceutical products derived from these plants. They have the potential to serve as a natural alternative to synthetic antihypertensive medications, possibly providing comparable results with fewer adverse effects. Furthermore, this review serves as an important reference for future studies on ethnomedicines that contain phytochemicals. © 2026 Muhaimin et al.

Author keywords

anak dalam tribe; antihypertension; herbal medicine; phytochemicals; traditional medicine

Indexed keywords

MeSH

Animals; Antihypertensive Agents; Blood Pressure; Ethnobotany; Humans; Hypertension; Indonesia; Medicine, Traditional; Plant Extracts; Plants, Medicinal

EMTREE drug terms

acetogenin; antihypertensive agent; calcium oxide; coumarin; coumarin derivative; epinephrine; flavonoid; garlic extract; ginger extract; midazolam; palm oil; phenylephrine; phytochemical; prednisone; sucrose; turmeric; antihypertensive agent; plant extract

EMTREE medical terms

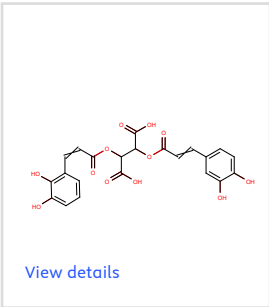
alcohol; allopathy; Annona muricata; antihypertensive therapy; Apium; Averrhoa; Averrhoa carambola; blood pressure; celery; Curcuma longa; garlic; ginger; heart rate; herbal medicine; human; hypertension; Indonesia; lime (fruit); male; medicinal plant; Morinda; Morinda citrifolia; nonhuman; Orthosiphon; pharmacology; randomized controlled trial; rat; review; traditional medicine; vibrissa; Wistar rat; animal; chemistry; drug effect; drug therapy; ethnobotany; hypertension; Indonesia; isolation and purification; medicinal plant; traditional medicine

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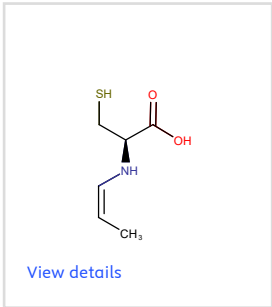
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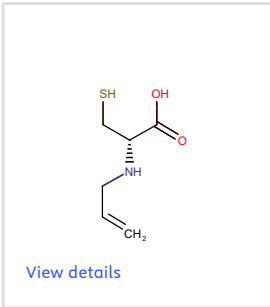
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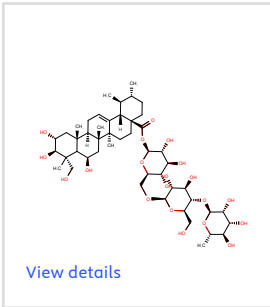
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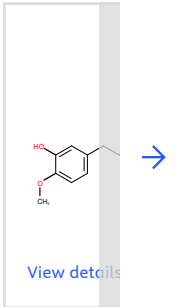
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Indonesian Ministry of Higher Education, Science and Technology	4303/B3/DT.03.08/2025, 3927/UN6, RKT/HK.07.00/2025, 3949/UN6.3.1/PT.00/2025	

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