Review Article

Antipyretic Medicinal Plants of Bangladesh: An Ethnobotanical and Traditional Perspective

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ABSTRACT

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| **Background:** Bangladesh boasts an impressive array of plant life, contributing to its unique ecological landscape. For centuries, medicinal plants have been central to the traditional healing practices of the Bangladeshi people, serving as a vital resource in their treatment of various ailments. Different plants are utilized for various physiological conditions, with fever being a particularly common one in the human body. A wide variety of medicinal plants have traditionally been used for managing fever. This study systematically reviews the medicinal plants found in Bangladesh that are used in the treatment of fever.**Aims:** This review article aims to compile a comprehensive list of traditional medicinal plants valued for their effectiveness in treating fever across Bangladesh. It gathers essential information about each plant, including the scientific name, local name, family name, and the plant parts used to alleviate fever. This catalog will aid researchers in the quest to discover new antipyretic agents.**Results:** A total of 139 plant species from 64 distinct families have been identified for their ability to reduce fever. The most commonly used plants include *Vitex negundo* L., *Ocimum sanctum* L., and *Ipomoea aquatica* Forsskal. Leaves are the primary part utilized for this purpose, with 58 species specifically noted. Additionally, roots, fruits, whole plants, and bark are also employed in fever treatment. |

*Keywords: Medicinal Plants; Fever; Bangladesh; Herbal Medicine; Medicinal Plants in Bangladesh; Antipyretic.*

1. INTRODUCTION

Fever is considered an acute-phase response generated by the body when it undergoes an infection or systemic inflammation (Mota-Rojas et al., 2021). A fever is defined as a body temperature that is higher than the typical range. Although normal body temperature may vary from person to person, it is generally around 37°C (98.6°F). A fever is not an illness but indicates that your body is working to combat an infection (Nilima et al., 2021). To highlight the adaptable nature of the febrile response, the Thermal Physiology Commission of the International Union of Physiological Sciences in 2001 described fever as a condition characterized by an increase in core temperature, which is frequently, though not exclusively, a component of the defensive mechanisms of multicellular organisms (hosts) against the invasion of living (microorganisms) or inanimate entities perceived as harmful or foreign by the host (Ogoina, 2011). Pathogen-associated molecular patterns, such as lipopolysaccharides from Gram-negative bacteria and peptidoglycan and lipoteichoic acid from Gram-positive bacteria, act as exogenous pyrogens by binding to Toll-like receptors located on immune and non-immune cells. This interaction triggers the release of pro-inflammatory cytokines, including interleukin-1 (IL-1), IL-6, and Tumor necrosis factor-alpha, which then travel to the brain and initiate the febrile response. Specifically, neurons in the pre-optic area generate prostaglandin E2 (PGE2), which binds to PGE2 receptors, ultimately resulting in fever.(Santacroce et al., 2023).

The use of plants for healing purposes can be traced back as far as 60,000 years (Gossell-Williams et al., 2006).Using natural products as medicines likely posed a significant challenge for early humans. It is highly probable that while foraging for food, they often consumed poisonous plants, which could result in vomiting, diarrhea, coma, or other toxic reactions, sometimes even death. However, through these experiences, early humans developed knowledge about edible materials and natural medicines (Yuan et al., 2016).

The significance of plants in medicine is even more crucial given the current global trend towards sourcing drugs from plant materials (Roger et al., 2015). Utilizing medicinal herbs can occasionally be more beneficial than relying on pharmaceutical medications.  The reasons herbal medicines are sometimes preferable include their cost-effectiveness, fewer side effects, various uses, and effectiveness for multiple conditions (Sam, 2019). Many communities, particularly in developing nations, rely on plants, which are recognized for producing a remarkable variety of biologically active phytochemicals, to treat numerous infectious diseases affecting both humans and livestock. In fact, the interest in medicines derived from plants is becoming a revived aid in health care (Nyinoh et al., 2018).

The World Health Organization reports that traditional and complementary medicine use is growing swiftly in many nations. Medicinal plants comprise 25% of all contemporary medications (Akhtar, 2022). It was estimated that the market value of herbal medicine was USD 98.60 billion in 2020 and is projected to achieve USD 391.22 billion by 2028, with a Compound Annual Growth Rate (CAGR) of 18.8% from 2021 to 2028. Consequently, herbs or medicinal plants are expected to play a significant role in the broader economic development (Uddin et al., 2022).

Even though Bangladesh has a relatively small land area, its fertile soil and favorable climate support a rich variety of plant life. The traditional healing methods in the country, developed over many centuries, are closely woven into the fabric of local communities. Around 1,000 medicinal plants are recognized for their healing properties by traditional healers in Bangladesh (Mahin et al., 2025). Medicinal plants have shown pharmaceutical effectiveness in treating fever through their extensive use by indigenous populations and through experimental and clinical studies conducted over time. These plants contain high levels of antioxidants, phenolic compounds, flavonoids, tannins, anthocyanins, and other bioactive compounds (Roger et al., 2015). In the in-vivo method, several plants have proven antipyretic potential, such as *Mitragyna parvifolia* (Roxb.) Korth*.*, *Acalypha indica* L., *Aegle marmelos* (L.)Corr., *Terminalia bellirica* (Gaertn.) Roxb*., Withania somnifera* (L.) Duna*, Ocimum sanctum* L. (Maciej Serda et al., 2016)(Khairani et al., 2024)(Jyothi et al., 2024)(Sharma et al., 2010)(Hussain et al., 2021)(Vuyyala et al., 2017).

This study aims to comprehensively investigate and document the traditional usage of Bangladeshi medicinal plants in fever therapy, assess their scientifically confirmed efficacy, and identify possible gaps for future pharmacological and clinical research.

2. material and methods

This review covers a range of plant species, carefully chosen based on reports available until January 2025. To gather pertinent information, a detailed search was performed across multiple electronic databases, including Google Scholar, PubMed, Scopus, Web of Science, and ScienceDirect. The keywords used in this search primarily centered on “fever,” “antipyretic,” “medicinal plants,” “Bangladesh,” and “traditional medicine.” The data obtained from the analyzed articles emphasizes important aspects such as the scientific name of each plant, its family classification, the local name used within Bangladeshi culture, and the specific parts of the plant employed for medicinal purposes. Only articles that provided this necessary information were included as references, ensuring a comprehensive and dependable overview of the topic.

3. TRADITIONALLY USED PLANTS FOR TREATING FEVER

Table 1 lists the plants used for managing fever. It includes the family name, local name, and the parts of each plant utilized for fever treatment.

**Table 1:** Medicinal plants used in the treatment of fever.

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| **Sl No** | **Biological Name** | **Family** | **Local Name**  | **Parts Used** | **Reference** |
| 1 | *Andrographis paniculata* (Burm.f.) Wall. ex Nees | Acanthaceae | Kalomegh, Kalamnath  | Leaves, stems | (Rahmatullah, Noman, et al., 2009) |
| 2 | *Cyperus scariosus* R.Br. |  Cyperaceae | Nagarmotha | Leaves, stems, roots | (Rahmatullah, Noman, et al., 2009) |
| 3 | *Scindapsus officinalis* (Roxb.) Schott |  Araceae | Takbir gach |  Leaves | (Rahmatullah, Noman, et al., 2009) |
| 4 | *Centella asiatica* (L.)Urb. |  Apiaceae | Thankuni |  Leaves | (Rahmatullah, Zobaer, et al., 2010) |
| 5 | *Nyctanthes arbor-tristis* L. |  Verbenaceae | Sheuli, Shefali | Young leaves | (Rani Biswas et al., 2011) |
| 6 | *Ageratum conyzoides* L. | Asteraceae  | Fulkuri, Uchanti  | Roots, leaves, flowers-buds | (Mahadi Hasan et al., 2014) |
| 7 | *Mitragyna parvifolia* (Roxb.)Korth. | Rubiaceae | Thei | Roots | (Rahmatullah et al., 2019) |
| 8 | *Prunus amygdalus* Batsch. | Rosaceae | Badam | Roots, bark | (Rahmatullah et al., 2019) |
| 9 | *Barleria lupulina* Lindl. | Acanthaceae | Laal-tarokh | Whole Plant | (Rahmatullah, Ferdausi, et al., 2010) |
| 10 | *Cuphea hyssopifolia* Kunth. | Lythraceae | Kablap | Leaves and flowers | (Rahmatullah, Ferdausi, et al., 2010) |
| 11 | *Acalypha indica* L. | Euphorbiaceae | Muktajhuri | Whole Plant | (Akber et al., 2011) |
| 12 | *Aegle marmelos* (L.)Corr. | Rutaceae | Bel | Leaves, bark, roots, flowers, fruits | (Akber et al., 2011) |
| 13 | *Cinnamomum camphora* (L.) J. Presl | Lauraceae | Korpoor | Woods | (Akber et al., 2011) |
| 14 | *Elettaria cardamomum* (L.) Maton | Zingiberaceae | Choto elach | Fruits | (Akber et al., 2011) |
| 15 | *Justicia adhatoda* L. | Acanthaceae | Bashok | Leaves and roots | (Akber et al., 2011) |
| 16 | *Piper betle* L. | Piperaceae | Paan | Leaves | (Akber et al., 2011) |
| 17 | *Piper nigrum* L. | Piperaceae | Gol morich | Flowers, fruits | (Akber et al., 2011) |
| 18 | *Stephania hernandifolia* (Willd.) Walp. | Menispermaceae | Akandi | Leaves, roots | (Akber et al., 2011) |
| 19 | *Terminalia bellirica* (Gaertn.) Roxb. | Combretaceae | Bohera | Fruits, gums | (Akber et al., 2011) |
| 20 | *Withania somnifera* (L.) Duna | Solanaceae | Ashwogondha | Whole plant, leaves, roots, seeds | (Akber et al., 2011) |
| 21 | *Pentapetes phoenicea* L.  | Sterculiaceae | Dupira | Flowers | (Malek et al., 2012) |
| 22 | *Adhatoda zeylanica* Medic. | Acanthaceae | Bassak | Leaves | (Rahman, 2014) |
| 23 | *Averrhoa carambola* L. | Averrhoaceae | Kamranga | Fruits | (Rahman, 2014) |
| 24 | *Leucas lavandulifolia* Sm. | Lamiaceae | Setadron | Leaves | (Rahman, 2014) |
| 25 | *Mimosa pudica* L. | Fabaceae | Lajjaboti | Roots | (Rahman, 2014) |
| 26 | *Ocimum sanctum* L. | Lamiaceae | Tulsi | Leaves, roots | (Rahman, 2014) |
| 27 | *Vitex negundo* L. | Verbenaceae | Nishinda | Leaves, roots | (Rahman, 2014) |
| 28 | *Cassia tora* L. | Fabaceae | Araj-pata | Leaves, seeds | (Rahmatullah, Ariful Haque Mollik, et al., 2010) |
| 29 | *Vernonia patula* (Dryand.) Merr. | Asteraceae | Joanpi | Roots | (Rahmatullah, Ariful Haque Mollik, et al., 2010) |
| 30 | *Abutilon indicum* (L.) Sweet | Malvaceae | Potari | Whole plant | (Ziaul et al., 2013) |
| 31 | *Neolamarckia cadamba* (Roxb.) Bosser | Rubiaceae | Kodom | Leaves | (Ziaul et al., 2013) |
| 32 | *Canna indica* L. | Cannaceae | Kalaboti. | Whole plant | (Ziaul et al., 2013) |
| 33 | *Diplazium esculentum* (Retz.) Sw. | Woodsiaceae | Dhekishak | Leaves | (Ziaul et al., 2013) |
| 34 | *Eichhornia crassipes* (Martius) Solms-Laubach | Pontederiaceae | Kochuripana | Whole plant | (Ziaul et al., 2013) |
| 35 | *Glycosmis arborea* (Roxb.) DC. | Rutaceae | Matmati | Whole plant | (Ziaul et al., 2013) |
| 36 | *Ixora cuneifolia* Roxb. | Rubiaceae | Musea | Leaves | (Ziaul et al., 2013) |
| 37 | *Tinospora cordifolia* (Willd.) Hook.f. & Thomson | Menispermaceae | Gulancha | Whole plant | (Ziaul et al., 2013) |
| 38 | *Mesua ferrea* L. | Clusiaceae | Nageshwa | Flowers | (Ziaul et al., 2013) |
| 39 | *Ocimum tenuiflorum* L. | Lamiaceae. | Kalo tulsi | Whole plant | (Ziaul et al., 2013) |
| 40 | *Oxalis corniculata* L. | Oxalidaceae | Amrul | Whole plant | (Ziaul et al., 2013) |
| 41 | *Phoenix sylvestris* (L.) Roxb. | Arecaceae | Khajur | Juice | (Ziaul et al., 2013) |
| 42 | *Datura metel* L. | Solanaceae | Dhutra | Seeds, leaves, roots | (Rahman & Keya, 2015) |
| 43 | *Ipomoea aquatica* Forsskal | Convolvulaceae | Kolmishak | Whole plant | (Rahman & Keya, 2015) |
| 44 | *Ipomoea batatus* (L.) Lam. | Convolvulaceae | Mistialu | Whole plant, roots | (Rahman & Keya, 2015) |
| 45 | *Luffa aegyptiaca* Mill. | Cucurbitaceae | Dhondol | Fruits | (Rahman & Keya, 2015) |
| 46 | *Stephania japonica* (Thunb.) Miers | Menispermaceae | Akornandi | Leaves, roots | (Rahman & Keya, 2015) |
| 47 | *Tamarindus indica* L.  | Caesalpiniaceae | Tetul | Pulp of the ripe fruits | (Rahman & Keya, 2015) |
| 48 | *Trichosanthes anguina* L.  | Cucurbitaceae | Chicinga | Leaves, Stems | (Rahman & Keya, 2015) |
| 49 | *Cajanus cajan* (L.)Millsp. | Fabaceae | Orhor | Leaves | (Rahmatullah, Khatun, et al., 2010) |
| 50 | *Citrus macroptera* Montrouz. | Rutaceae | Shatkora | Fruits | (Rahmatullah, Khatun, et al., 2010) |
| 51 | *Lawsonia inermis* L. | Lythraceae | Mehedi, Nionda | Leaves | (Rahmatullah, Khatun, et al., 2010) |
| 52 | *Melia azedarach* L. | Meliaceae | Mitha neem, Ghora neem, Kalo neem | Leaves, bark | (Rahmatullah, Khatun, et al., 2010) |
| 53 | *Morus alba* L*.* | Moraceae | Tuth fol | Fruits | (Rahmatullah, Khatun, et al., 2010) |
| 54 | *Hibiscus sabdariffa* L.  | Malvaceae | Lalmesta | Calyxes | (Apu et al., 2012) |
| 55 | *Momordica charantia* L.  | Cucurbitaceae | Korola | Fruits | (Rahmatullah, Abdur Rahman, et al., 2010) |
| 56 | *Citrullus lanatus* (Thunb.) Matsum. & Nakai | Cucurbitaceae | Tormuj | Fruits | (Rahmatullah, Abdur Rahman, et al., 2010) |
| 57 | *Cuscuta reflexa* Roxb. | Cuscutaceae | Alok lota | Stems | (Rahmatullah, Abdur Rahman, et al., 2010) |
| 58 | *Eclipta prostrata* (L.) L. | Asteraceae | Kala kuita | Leaves | (Rahmatullah, Abdur Rahman, et al., 2010) |
| 59 | *Cannabis sativa* L. | Cannabaceae | Shindhik | Roots | (Rahmatullah et al., 2011) |
| 60 | *Chromolaena odorata* (L.) R.M.King & H.Rob. | Asteraceae | Ful ghori | Leaves, roots | (Rahmatullah et al., 2011) |
| 61 | *Morinda angustifolia* Roxb. | Rubiaceae | Daru horidra | Leaves, bark | (Israt Jahan et al., 2011) |
| 62 | *Murraya koenigii* (L.)Spreng. | Rutaceae | Norshing | Leaves, roots, bark, flowers | (Israt Jahan et al., 2011) |
| 63 | *Eupatorium odoratum* L. | Asteraceae | Phooler chori | Whole plant | (District et al., 2010) |
| 64 | *Aquilaria malaccensis* Lam. | Thymelaeaceae | Agar | Heartwood extract | (M. K. Islam et al., 2014) |
| 65 | *Asparagus racemosus* Willd. | Asparagaceae | Shatamuli | Leaves and tuberous roots | (M. K. Islam et al., 2014) |
| 66 | *Calotropis gigantea* (L.)W.T. Aiton | Asclepiadaceae | Akanda | Leaves | (M. K. Islam et al., 2014) |
| 67 | *Citrus maxima* (Burm.) Merr. | Rutaceae | Jambura | Fruits | (M. K. Islam et al., 2014) |
| 68 | *Clitoria ternatea* L. | Fabaceae | Aparajita | Roots | (M. K. Islam et al., 2014) |
| 69 | *Cucumis maderaspatanus* L. | Cucurbitaceae | Telakucha | Whole plant | (M. K. Islam et al., 2014) |
| 70 | *Dillenia indica* L. | Dilleniaceae | Chalta | Fruits | (M. K. Islam et al., 2014) |
| 71 | *Hemidesmus indicus* (L.)R.Br. | Asclepiadaceae | Anantamul | Roots, bark | (M. K. Islam et al., 2014) |
| 72 | *Madhuca longifolia* (L.) J.F. Macbr.Gmel. | Sapotaceae | Mahua | Leaves  | (M. K. Islam et al., 2014) |
| 73 | *Mentha piperita* L. | Lamiaceae | Pipul | Leaves, flowers | (M. K. Islam et al., 2014) |
| 74 | *Mentha spicata* L. | Lamiaceae | Pudina | Leaves | (M. K. Islam et al., 2014) |
| 75 | *Mesua ferrea* L. | Clusiaceae | Nageshwar | Leaves, flowers  | (M. K. Islam et al., 2014) |
| 76 | *Mimusops elengi* L. | Sapotaceae | Bokul | Bark | (M. K. Islam et al., 2014) |
| 77 | *Oxalis corniculata* L. | Oxalidaceae | Amrul | Leaves | (M. K. Islam et al., 2014) |
| 78 | *Paederia foetida* L. | Rubiaceae | Gandhal | Leaves | (M. K. Islam et al., 2014) |
| 79 | *Rauwolfia serpentina* (L.) Benth. ex Kurz | Apocynaceae | Sorpogonda | Roots | (M. K. Islam et al., 2014) |
| 80 | *Santalum album* L. | Santalaceae | Chandan | Woods | (M. K. Islam et al., 2014) |
| 81 | *Azadirachta indica* Adr.Juss. | Meliaceae | Neem | Fresh green leaves, bark | (Ahmed Mukul et al., 2007) |
| 82 | *Glycosmis pentaphylla* (Retz.) DC. | Rutaceae | Fatikgila | Green leaves  | (Ahmed Mukul et al., 2007) |
| 83 | *Trewia nudiflora* L. | Euphorbiaceae | Chagal ledi | Leaves  | (Ahmed Mukul et al., 2007) |
| 84 | *Alstonia scholaris* (L.) R. Br. | Apocynaceae | Chatim | Bark | (Rahmatullah, Rahman, et al., 2010) |
| 85 | *Holarrhena antidysenterica* (L.) Wall. ex A. DC | Apocynaceae  | Kurchi | Leaves, bark | (Rahmatullah, Rahman, et al., 2010) |
| 86 | *Erythrina variegate* L. | Fabaceae | Mander | Leaves | (Rahmatullah, Rezwanul Haque, et al., 2010) |
| 87 | *Costus speciosus* (J.Konig.) Sm. | Costaceae | Keow | Roots | (Mehedi Hasan et al., 2010) |
| 88 | *Piper longum* L. | Piperaceae | Pipulti | Bark, fruits  | (Mehedi Hasan et al., 2010) |
| 89 | *Polyalthia longifera* (Sonn.) Thwaites | Annonaceae | Debadaru | Bark | (Mehedi Hasan et al., 2010) |
| 90 | *Ricinus communis* L. | Euphorbiaceae | venna | Leaves, seeds | (Mehedi Hasan et al., 2010) |
| 91 | *Sida cordifolia* L. | Malvaceae | Berela | Roots | (Mehedi Hasan et al., 2010) |
| 92 | *Tinospora cordifolia (willd.)* Hook. f.& Thomas. | Menispermaceae | Guloncho | Leaves, stems | (Mehedi Hasan et al., 2010) |
| 93 | *Annas cosmosus* (L.) Merr*.* | Bromeliaceae | Annarhos | Leaves, fruits  | (Rahmatullah, Mukti, et al., 2009) |
| 94 | *Duranta repens* L. | Verbenaceae | kata-mehendhe | Leaves, bark, fruits | (Rahmatullah, Mukti, et al., 2009) |
| 95 | *Clerodendrum viscosum* Vent*.* | Verbenaceae | Sujjara | Roots | (Rashid et al., 2012) |
| 96 | *Ficus benghalensis* L. | Moraceae | Bot | Aerial roots | (Shahidullah et al., 2009) |
| 97 | *Hibiscus rosa sinensis* L. | Malvaceae | Joba baha | Flower buds | (Shahidullah et al., 2009) |
| 98 | *Strychnos nux-vomica* L. | Loganiaceae | Kuchlo | Bark | (Shahidullah et al., 2009) |
| 99 | *Piper peepuloides* Roxb. | Piperaceae | Pepula | Leaves | (Dulla & Jahan, 2017) |
| 100 | *Carica papaya* L. | Caricaceae | Pepe | Fruits | (Rahmatullah, Abdul Momen, et al., 2010) |
| 101 | *Ocimum gratissimum* L. | Lamiaceae | Kalo tulshi | Leaves | (Rahmatullah, Abdul Momen, et al., 2010) |
| 102 | *Adiantum philippense* L. | Adiantaceae | Goyalelata, Kalijhant | Whole plant | (Haque et al., 2015) |
| 103 | *Alpinia nigra* (gaertn.)Burtt. | Zingiberaceae | Jangli Ada, Tara | Roots | (Haque et al., 2015) |
| 104 | *Brassica nigra* (L.)Koch. | Brassicaceae | Kalo Sarisha | Seeds | (Haque et al., 2015) |
| 105 | *Derris indica* (lamk.)Bennet. | Fabaceae | Karanija, Kanji | Roots, leaves | (Haque et al., 2015) |
| 106 | *Flacourtia indica* (Burm.f.)Merr. | Flacourtiaceae | Boichi, Benchi | Bark, roots | (Haque et al., 2015) |
| 107 | *Hedyotis corymbosa* (L.)Link. | Rubiaceae | Khetpapra | Whole plant | (Haque et al., 2015) |
| 108 | *Phyla nodiflora* (L.) Greene | Verbenaceae | Frogfruit  | Leaves | (Haque et al., 2015) |
| 109 | *Zizyphus mauritiana* Lam. | Rhamnaceae | Ber, Kool | Roots, bark | (Ahmed et al., 2021) |
| 110 | *Diospyros montana* Roxb. | Ebenaceae | Tamal | Whole plant | (Rahman & Kona, 2016) |
| 111 | *Ixora coccinia* L. | Rubiaceae | Rangan | Roots, flowers | (Rahman & Kona, 2016) |
| 112 | *Kyllinga monocephala* Rottb. | Cyperaceae | Nirbisghas | Roots | (Rahman & Kona, 2016) |
| 113 | *Nymphoides indicum* (L.) Kuntze | Menyanthaceae | Soto Chandmala | Whole plant | (Rahman & Kona, 2016) |
| 114 | *Ocimum Americanum* L. | Lamiaceae | Babuitulsi | leaves | (Rahman & Kona, 2016) |
| 115 | *Solanum nigrum* L. | Solanaceae | Titbegun | Fruits | (Rahman & Kona, 2016) |
| 116 | *Curcuma ferruginea* Roxb. | Zingiberaceae | Bon ada, Bau ada | Rhizomes | (Afroz et al., 2011) |
| 117 | *Hyptis suaveolens* (L.)Poit. | Lamiaceae | Tukma | Seeds | (Hossan et al., 2018) |
| 118 | *Myristica fragrans* Houtt. | Myristicaceae | Joyfol biz | Fruits | (Hossan et al., 2018) |
| 119 | *Vetiveria zizanioides* (L.)Nash | Lamiaceae | Khoskhos | Roots | (Hossan et al., 2018) |
| 120 | *Allium sativum* L. | Liliaceae | Rasun | Bulb | (Khatun & Mahbubur Rahman AHM, 2018) |
| 121 | *Curcuma longa* L. | Zingiberaceae | Holud | Rhizomes, flowers  | (Khatun & Mahbubur Rahman AHM, 2018) |
| 122 | *Enhydra fluctuans* Lour. | Asteraceae | Helencha | Whole plant | (Khatun & Mahbubur Rahman AHM, 2018) |
| 123 | *Heliotropium indicum* L. | Boraginaceae | Hatisur | Leaves | (Khatun & Mahbubur Rahman AHM, 2018) |
| 124 | *Peperomia pellucida* (L.) Kunth. | Piperaceae | Peperomia | Leaves | (Khatun & Mahbubur Rahman AHM, 2018) |
| 125 | *Mangifera indica* L. | Anacardiaceae | Aam | Seeds | (F. Islam et al., 2011) |
| 126 | *Phyllanthus emblica* L. | Euphorbiaceae | Amloki | Fruits | (F. Islam et al., 2011) |
| 127 | *Saccharum officinarum* L. | Poaceae | Ikkhu | Stems  | (F. Islam et al., 2011) |
| 128 | *Swertia chirayita* (Roxb.) H.Karst. | Gentianaceae | Chirota | Bark | (F. Islam et al., 2011) |
| 129 | *Syzygium cumini* (L.) Skeels | Myrtaceae | Jaam | Seeds | (F. Islam et al., 2011) |
| 130 | *Tinospora crispa* (L.) Hook.f. & Thomson | Menispermaceae | Khorosh | Stems, leaves | (F. Islam et al., 2011) |
| 131 | *Alternanthera philoxeroides* (Mart.) Griseb. | Amaranthaceae | Helen cha | Whole plant | (Moriom Jamila & Mahbubur Rahman AHM, 2016) |
| 132 | *Citrus aurantiifolia* (Christm.) Swingle. | Rutaceae | Lebu | Fruits | (Moriom Jamila & Mahbubur Rahman AHM, 2016) |
| 133 | *Coccinia grandis* (L.)Voigt | Cucurbitaceae | Tela kucha | Leaves | (Moriom Jamila & Mahbubur Rahman AHM, 2016) |
| 134 | *Coriandrum sativum* L. | Apiaceae | Dhone | Whole plant | (Moriom Jamila & Mahbubur Rahman AHM, 2016) |
| 135 | *Cyperus rotundus* L. | Cyperaceae | Mutha | Tubers | (Moriom Jamila & Mahbubur Rahman AHM, 2016) |
| 136 | *Ayapana triplinervis* (Vahl) R.M.King & H.Rob. | Asteraceae | Ayapan | Leaves | (Moriom Jamila & Mahbubur Rahman AHM, 2016) |
| 137 | *Moringa oleifera* Lam. | Moringaceae | Tut | Leaves, bark | (Moriom Jamila & Mahbubur Rahman AHM, 2016) |
| 138 | *Nelumbo nucifera* Gaertn. | Nelumbonaceae | Poddo | Flowers | (Moriom Jamila & Mahbubur Rahman AHM, 2016) |
| 139 | *Zingiber officinale* Roscoe. | Zingiberaceae | Ada | Rhizomes | (Moriom Jamila & Mahbubur Rahman AHM, 2016) |

**4. THE SIGNIFICANCE OF DIVERSE PLANT FAMILIES**

A total of 139 distinct plant species from 64 different families have been identified as traditional remedies for managing fevers. Among these diverse plant families, the Lamiaceae family stands out, contributing the largest proportion of fever-relieving species, with 9 species, which account for 6% of the total. Notable antipyretic plant species from this family include *Leucas lavandulifolia* Sm., *Ocimum sanctum* L., and *Mentha piperita* L.

The second most significant families are Rubiaceae and Asteraceae, with each contributing 7 species to the list, which accounts for 5% each. Some popular antipyretic plants from the Rubiaceae family include *Mitragyna parvifolia* (Roxb.)Korth., *Neolamarckia cadamba* (Roxb.) Bosser, and *Morinda angustifolia* Roxb.; while important plants from the Asteraceae family are *Chromolaena odorata* (L.) R.M.King & H.Rob., *Ageratum conyzoides* L., and *Eupatorium odoratum* L.

Other significant plant families are Cucurbitaceae, Fabaceae, Piperaceae, Rutaceae, and Zingiberaceae, as each of them contributes 4% to the list. Additionally, the Acanthaceae, Menispermaceae, Euphorbiaceae, Malvaceae, and Verbenaceae families each contribute 3%.

Research suggests that plant species within the Lamiaceae family may possess common antipyretic phytochemicals that could aid in fever management. A significant number of plants traditionally used to treat fever belong to this family. Therefore, these plants could be promising candidates for further research aimed at developing new antipyretic substances.

**Figure 1:** The pie chart illustrates the percentage of different plant families that contribute species for fever management

**5. FUTURE PERSPECTIVE**

This study presents a comprehensive listing of medicinal plants traditionally used for managing fevers in Bangladesh. While traditional medicine has long relied on various herbs for fever treatment, many of these claims have not been verified by modern scientific methods. A total of 139 plant species have been identified as traditionally used throughout Bangladesh to alleviate fevers. Some of these plants have been scientifically validated for their fever-reducing effects, whereas others continue to be widely used in traditional remedies despite lacking rigorous pharmacological evaluation.

Among all the identified species, some may remain entirely unexplored, while a few could contain potent phytochemicals that are beneficial for modern antipyretic treatments. The bioactive compounds and mechanisms of action of these plants require systematic investigation to determine their efficacy, safety, and potential for pharmaceutical development. Future research should focus on isolating and characterizing the active phytochemicals responsible for their antipyretic properties, conducting both in vitro and in vivo studies, and assessing their pharmacokinetics and pharmacodynamics. Additionally, exploring possible synergistic effects among these medicinal plants could lead to the development of innovative polyherbal treatments with enhanced therapeutic benefits.

Bridging the gap between traditional knowledge and evidence-based medicine is essential for creating safe and effective natural remedies. By deepening the scientific understanding of these plant species, this research aims to contribute to the discovery of new antipyretic agents, potentially leading to more accessible, sustainable, and plant-based treatment options for fever management.

6. Conclusion

This review paper seeks to systematically gather an extensive list of traditional medicinal plants used for treating fever, bringing together findings from diverse research articles focused on local flora in Bangladesh. The compilation includes 139 species categorized into 64 unique botanical families. Although many of these plants require additional pharmacological research, several have already shown confirmed therapeutic effects that could alleviate fever. This manuscript will aid researchers in pinpointing lesser-studied species and promoting further scientific exploration into their potential therapeutic benefits and integration into contemporary medical practices.

**DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

Consent (whereever applicable)

Not applicable.

Ethical approval (where ever applicable)

Not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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