



## Review Article

### A REVIEW ON THERAPEUTIC AND PHARMACOGNOSTIC PROPERTIES OF *VELLARUGU* (*ENICOSTEMMA LITTORALE* BLUME)

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#### ABSTRACT

*Vellarugu* {*Enicostemma littorale* Blume (*E. littorale*)} (Gentian family) is a highly nutritious perennial medicinal plant and used as a medicine in Siddha Medical System to treat several disease conditions such as diabetes mellitus, rheumatism (*Vata* diseases), skin diseases (*Pitta* diseases), constipation, abdominal ulcers, swelling, obesity and insect poisoning. It is a rainy season herb, growing on moist, damp and shady ridges and slopes of the borders of cultivated fields and widely distributed in India, Eastern and Southern Africa, South America, and Asia. Whole plant, Leaves, Flowers, stem and Roots are mostly used for the treatment. Although there are numerous scientific studies related to multiple usage of *Vellarugu* plant, this study attempts to collect all available information and prepare a monograph about the *E. littorale* for documentation purpose. *E. littorale* has a number of anti-oxidative phytochemicals which include five alkaloids, catechins, saponins, two sterols, triterpinoids, phenolic acid, flavonoids, xanthenes and volatile oil, swetiamerin, and gentianine. Higher percentage of total ash, water soluble ash and acid insoluble ash also were found in this plant. *E. littorale* has very low toxicity and is a safe and the presence of heavy metals was below the WHO/FDA permissible limits. Numerous studies stated that *E. littorale* has the therapeutic pharmacological actions such as anti-diabetic, antioxidant, hypolipidaemic, hepatoprotective, anti-inflammatory, analgesic, anti-arthritic, anti-microbial, anti tumour, and etc. This monograph may provide and confirmed the documentary evident for multiple medicinal and therapeutic uses and pharmacological effects of the *E. littorale*.

**KEYWORDS:** *Vellarugu*, *Enicostemma littorale*, Pharmacognosy, Therapeutic Uses.

#### INTRODUCTION

Two systems of Medicine namely Allopathic and Indigenous are mainly practiced in Sri Lanka. In all, the three indigenous systems (Ayurveda, Siddha and Unani Medicine) in Sri Lanka, different parts of the medicinal plants play a major role and constitute the backbone of the system. Siddha Medicine is one of the traditional medicine and popular among the Tamil speaking people of Northern and Eastern Provinces of Sri Lanka.

Medicinal plants have been playing an essential role in the development of human culture. As a source of medicine, Medicinal plants have always been at forefront virtually all cultures of civilizations.<sup>[1]</sup> Medicinal herbs have been known for centuries and are highly valued all over the world as a rich source of therapeutic agents for prevention of diseases and ailments.<sup>[2]</sup> Even today, the World Health Organization (WHO) estimates that up to 80 percent of the world population still relies mainly on traditional remedies such as herbs for their primary health care.<sup>[3]</sup> Ahmed et al., (2004) mentioned that according to a survey conducted by W.H.O.,

traditional healers treat 65% patients in Sri Lanka and 80% in India.<sup>[4]</sup>

Approximately 72,000 plant species were estimated for having medicinal properties. Of which, India recognizes 3,000 plant species for having medicinal values.<sup>[5]</sup> The WHO has appreciated the importance of medicinal plants for public health care in developing nations and has evolved guidelines to support the member states in their efforts to formulate national policies on traditional medicine, and to study their potential usefulness including evaluation, safety, and efficacy.<sup>[6]</sup>

*Vellarugu* {*Enicostemma littorale* Blume (*E. littorale*) (*Enicostemma hyssopifolium*)}<sup>[7]</sup> plays a vital role in human healthcare.<sup>[5]</sup> *E. littorale* (Gentian family) is an herbaceous plant and seem to be rich in medicinal compounds.<sup>[8]</sup> It is a well-known plant used as drug in Ayurveda, Unani, Siddha, Allopathic, Homeopathy, Naturopathy and Home Remedies<sup>[9]</sup> and it is widely used in Siddha system of medicine under the name "*Vellarugu*".<sup>[10-12]</sup> It is commonly known as Chota-kirayata or Chotachiryata