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# HerbClip™

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**FILE: ■Lemon Balm (*Melissa officinalis*)**

**HC 100475-353**

**Date: May 30, 2008**

**RE: Exposition on Lemon Balm**

Duke JA. The evidence for lemon balm. *Alt Comp Ther.* August 2007:173-177.

In his inimitable style, Dr. James A. Duke, the dean of American herbal advocates, assesses the available evidence that lemon balm (*Melissa officinalis*) exerts many positive effects which can prevent and/or treat a similarly wide variety of ailments.

Duke points out that pharmaceutical drugs taken as prescribed "kill more than 100,000 patients" annually in the US, in comparison with herbs' fewer than 100 attributable deaths, and half of all approved pharmaceuticals are withdrawn from the market in their first decade, "often because of unexpected side effects." Despite this, many allopaths, the mass media, and the "megapharmaceutical" industry, remain decidedly "herbiphobic". He uses lemon balm as just one example of the relative safety of herbs, whose constituents have been known to humans for thousands of years, as opposed to novel synthetic chemicals.

Table 1 lists lemon balm's antidepressant, anti-inflammatory, antioxidant, antiulcer, antiulcerogenic, anxiolytic, central nervous system (CNS) stimulating, immunostimulant, neuroprotective and (GABA)-ergic ingredients, leaving Duke "prepared to bet [his] herb collection that a lemon balm salad would beat the antidepressant drug nefazodone hydrochloride (Serzone) – discontinued in the [US] in 2004 – with respect to antidepressant effects."

Similarly, Table 2 lists lemon balm's ingredients with probable and potential activity against Alzheimer's disease; this is a lengthy table, and there is significant scientific support for Duke's proposal. In one analysis of herbal treatments for Alzheimer's, lemon balm, sage (*Salvia officinalis*), and two Chinese formulations appeared to have therapeutic effects; in another study, ginkgo (*Ginkgo biloba*) was also identified as therapeutic. All five herbs and herbal preparations are useful for cognitive impairment, and lemon balm and one formulation, because they had sedative effects, were also useful for the agitation that often occurs in Alzheimer's patients. British scientists have "pointed to sage, lemon balm, and rosemary [*Rosmarinus officinalis*] as particularly promising nontoxic herb[s] with pan-

cultural traditions for treating cognitive deficits, including those associated with aging." In a four-month long parallel, randomized, placebo-controlled study involving 42 patients with mild to moderate Alzheimer's, lemon balm extract significantly improved cognition and reduced agitation relative to placebo.

Table 3 lists lemon balm's ingredients with probable and potential activity against dyspepsia. It is among several herbs used traditionally for centuries, worldwide, for gastrointestinal complaints such as dyspepsia, gastritis and peptic ulcers. In 2005, the gram-negative bacterium which causes gastritis and peptic ulcers, *Helicobacter pylori*, was challenged with several of these herbs. Ginger (*Zingiber officinale*) and rosemary were potent inhibitors of the organism, with minimum inhibitory concentration (MIC) values of 25 µg/ml. Fennel (*Foeniculum vulgare*), oregano (*Origanum vulgare* ssp. *hirtum*), and a 1:1 combination of turmeric (*Curcuma* spp.) and ginger each had two-fold greater MICs of 50 µg/ml. Lemon balm, peppermint (*Mentha x piperita*), anise seed (*Pimpinella anisum*), caraway seed (*Carum carvi*) and cardamom seed (*Elettaria cardamomum*) each had MICs of 100 µg/ml. A proprietary German product, Iberogast® (Steigerwald Arzneimittelwerk GmbH; Darmstadt, Germany), which contains lemon balm, has been found effective in settling the stomach, alone or taken with other herbal digestives.

Several herbs have anti-herpes effects, including lemon balm, against both *Herpes simplex* virus types, HSV-1 and HSV-2, which cause cold sores and genital herpes, respectively. Its effects are antiviral, analgesic, antiseptic, immunostimulant and antinociceptive. One group of Turkish scientists reported essential oil of lemon balm only slightly toxic to HSV-2, a conclusion Duke calls surprising, and which is not supported by other research. Table 5 lists lemon balm's ingredients with probable and potential activity in insomnia. Although research on the herb as a sedative is sparse, it is approved by the German Commission E for this purpose. Duke also discusses stress, the underlying cause of "an estimated 80% of all visits to primary care physicians." There has been some research supporting lemon balm's efficacy in reducing stress, and Duke suggests that many of its components, presented in the preceding tables, could probably or possibly benefit this condition.

Duke concludes with a brief statement of his belief that the human body, striving for homeostasis, "mines" hundreds of thousands of biologically active compounds from foods, using those which are needed and excluding unneeded ones. Lemon balm's genetically familiar phytochemicals –caffeic acid, rosmarinic acid, linalool, eugenol, limonene, thymol, myrcene, geraniol, citral, citronellal, citronellol, benzaldehyde, and many more -- are, he says, safer and more efficacious than synthetics, to which humans have been exposed for less than 200 years.

— Mariann Garner-Wizard

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