ABSTRACT

TITLE:	Validating the Use of English Lavender Extract as an Herbal Remedy to Combat Inflammation
AUTHOR(S):	McLain, Katherine; Byrd, Sherell
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ABSTRACT: It has been shown that low grade chronic inflammation is a prerequisite for the development of cancer, arthritis, inflammatory bowel disease, cardiovascular disease and type II diabetes. A key orchestrator of the inflammation response is NF-B, a cytosolic transcription factor that is found in all cell types. Once activated, NF-B initiates cell proliferation and the production of pro-inflammatory cytokines. In an acute response to wounding or infection, the ability of immune cells to mitigate damage is crucial to the survival of the host. When these responses go unregulated, however, disease results. Lavender (Lavendula angustifolia) is an herbal remedy with a long history of use in Europe. Studies have demonstrated that administration of lavender essential oil to LPS stimulated monocytes reduced activation of NF-B. The aqueous extract, however, has not been tested for its effect on this pathway. This combined with the fact that an aqueous extract of the herb is easy to prepare and requires little if any lifestyle adjustments, makes validating the anti-inflammatory efficacy of an aqueous extract worthy of study. In this study macrophages (RAW 264.7 cells) were treated with aqueous extract of Lavender flowers. Subsequent to treatment with whole herb extract, an immune response was instigated in the cells by exposing them to lipopolysaccharide (LPS). NF-B activation was analyzed using an ELISA. We show that aqueous Lavender extract decreases NF-B activation, therefore; we can recommend aqueous Lavender extract as part of anti-inflammatory protocols.