New Study shows 5-LOXIN® AKBA to Inhibit inflammation and tissue breakdown in vitro and in vivo

Morristown, NJ - A study published in this month’s issue of Antioxidants & Redox Signaling showed the efficacy of 5-LOXIN® AKBA in the inhibition of induced inflammation and inhibition of cartilage-degrading enzymes. 5-LOXIN is a boswellia serrata extract, providing 30% AKBA, the most potent boswellic acid. The study also showed significantly greater benefit with 5-LOXIN compared to ordinary boswellia serrata extract, which provide only 3% AKBA.

According to PLT President Paul Flowerman, “This is an important study affirming 5-LOXIN® efficacy in several models, further developing the body of evidence supporting the Ayurvedic herb boswellia.” He continued, “Our partner Laila Impex has utilized state of the art technology to advance traditional Ayurvedic plants.”

Previously, 5-LOXIN was shown to inhibit the activity of matrix metalloproteinases (MMPs), a group of enzymes that are involved in the breakdown of connective tissues. In this study, 30% AKBA potently prevented the induced expression and activity of MMPs in human microvascular Cells, the cells that make up human blood vessels.

The researchers then tested 5-LOXIN® 30% AKBA in vivo, measuring the prevention of induced inflammation in rat paws, compared to ordinary boswellia extract.

The researchers concluded, “In all experiments, both in vitro and in vivo, 30% AKBA was more effective than 3% AKBA.”

Boswellia serrata (frankincense) has been used in traditional Ayurvedic medicine for treatment of inflammation since antiquity, and has been supported clinically. For example, a recent randomized double-blind placebo-controlled study of boswellia in 30 patients for 8 weeks reported significant decrease in knee pain, increased knee flexion, and increased walking distance. The frequency of swelling in the knee joint was significantly decreased.
5-LOXIN® works by inhibiting an inflammatory enzyme called 5-lipoxygenase (5-LOX). While not as well recognized as the COX-2 enzyme, it plays a significant role in the expression of inflammation by inhibiting leukotriene biosynthesis. 5-LOXIN® has also been shown in published research to inhibit MMPs and inhibit the expression of the inflammatory mediators I-CAM and V-CAM.

Laila Nutraceuticals is a leader in process development for standardized herbal extracts and phytochemicals. LN is a primary manufacturer of these technologies, and supports this work with patents and publications.

PLT has 50 years of experience supplying high quality raw materials from around the world and delivers customized solutions to the Food, Nutraceutical and Cosmeceutical industries.

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