



## ➔ Product Review ←

#288 March 2016

### **HEPATODETOX SELECT™ – AN EXCITING REFORMULATION!**

#### **INTRODUCTION**

We are very excited to announce that we have reformulated our **HepatoSelect™** product so that it not only supports general liver function but also specifically acts to optimize detoxification functions in the liver. Hence, we have renamed the product, calling it **HepatoDetox Select™**. Enclosed is a technical bulletin with a complete description of the product. Upon looking at the formulation, your first thought might be that it is very similar to many other liver support products in the professional supplement marketplace. However, I want to bring your attention to one constituent in **HepatoDetox Select™** that is not only rarely seen in comparable liver support products but, based on the research I am about to present, makes **HepatoDetox Select™** the clear product of choice when attempting to support one of the most important areas of need in chronically ill patients, liver detoxification capacity.

#### **MERIVA® CURCUMIN PHYTOSOME – A RESEARCH SUPPORTED, BIOAVAILABLE CURCUMIN WITH MAJOR DETOX SUPPORT PROPERTIES**

Unlike many liver support products in the professional supplement marketplace, **HepatoDetox Select™** not only contains curcumin but contains the highly bioavailable form, **Meriva® curcumin phytosome**, that is found in so many of our other products due its tremendous, research documented anti-inflammatory properties.

#### **Why is it important for a liver detox support product to have significant anti-inflammatory properties?**

The answer is that systemic inflammation will significantly down-regulate liver detoxification capacity, as noted by Gerbal-Chaloin et al in their paper “Nuclear receptors in the cross-talk of drug metabolism and inflammation” (Gerbal-Chaloin et

al. *Drug Metab Rev*, Vol. 45, No. 2, pp. 122-144, 2013):

“...because of its strategic position in the body, the liver integrates signals during infection or systemic inflammation that affect the pharmacokinetics and the bioavailability of drugs through downregulation of expression and activity of drug-metabolizing enzymes and drug transporters. The consequences of such deregulation influence the susceptibility of organs and tissues to the therapeutic or toxic effect of a compound and increase the toxicity of drugs with a low therapeutics index.”

Why is Meriva® used in **HepatoDetox Select™** instead of a typical commercial curcumin? Consider the following quote from the paper “Meriva® + glucosamine versus chondroitin + glucosamine in patients with knee osteoarthritis: an observational study” by Belcaro et al (Belcaro G et al. *Eur Rev Med Pharmacological Sci*, Vol. 18, pp. 3959-3963, 2014):

“Meriva® is based on curcumin, a traditional product of traditional Indian medicine. Curcumin is one of the most extensively investigated natural products and its broad spectrum of preclinical activity and low toxicity suggests benefit for the treatment of several inflammatory conditions. However, only few successful clinical studies of curcumin have been reported, mainly due to its poor oral bioavailability. In fact, unrealistically-high dosages of curcumin (>10 g/day) are required to achieve plasma concentrations corresponding to those suggested in preclinical studies. To overcome these issues, Meriva® was developed, a phytosome complexing curcumin with phosphatidylcholine.”

(Please note that the phosphatidylcholine found in the Meriva® contained in **HepatoDetox Select™** is derived from sunflower.)

Additional information about the anti-inflammatory properties of curcumin can be found in the paper “Drug development for liver diseases: focus on picroliv, ellagic acid and curcumin” by Girish and Pradhan (Girish C & Pradhan SC. *Fundamental Clin Pharm*, Vol. 22, pp. 623–632, 2008:

**“Pharmacological actions of curcumin as an anti-inflammatory agent have been examined by Srimal and Dhawan. Curcumin is found to be effective in acute as well as chronic cases of inflammation with potency approximately equal to phenyl butazone. Curcumin and its analogues have shown anti-inflammatory activity in carrageenan-induced paw oedema in rats.”**

In addition:

**“Curcumin inhibited cyclo-oxygenases and lipoxygenases, and thereby inhibited the production of prostaglandin E2 and leukotrienes B4 and C4.”**

### ***OTHER WAYS MERIVA® SUPPORTS LIVER FUNCTION***

What follows are some additional quotes from the Girish and Pradhan paper that describe other ways curcumin protects and supports liver function besides its impact on inflammation. Consider the following:

**“Curcumin’s hepatoprotective activity may stem from its antioxidant and free radical scavenging effect against reactive oxygen species including superoxide anion radicals, hydroxyl radicals and nitrogen dioxide radicals. It also has anti-inflammatory, antiapoptotic activity and can act as an iron chelator. Curcumin modulates the activity of many phase I drug-metabolizing enzymes in the liver and prevents the activation of many toxic chemicals.”**

Furthermore:

**“Curcumin enhances liver detoxification by increasing the activity of glutathione S-transferase enzyme, which conjugates glutathione with a wide variety of toxins to facilitate their removal from the body. Curcumin inhibits the proliferation of hepatic stellate cells and modulates several intracellular signaling pathways, which ultimately lead to liver fibrosis. It inhibits NF-kappaB activation and production of pro-inflammatory cytokines.”**

The next set of quotes provide some of the specifics of the properties of curcumin mentioned above:

**“Most of its hepatoprotective actions are related to its antioxidant property.”**

In addition:

**“Curcumin also protected against oxidative stress induced by iron, cadmium, selenium and copper.”**

The next quote provides specifics in the impact of curcumin on NF-kappa B:

**“Curcumin by inhibiting the activation of NF-kappaB prevented alcohol-induced liver diseases as well as methionine- and choline-deficient diet-induced steatohepatitis in animals.”**

What follows are more of the particulars on curcumin and inflammatory mediators:

**“Curcumin suppresses inflammation by reducing the levels of inflammatory cytokines including IFN-gamma, TNF- $\alpha$  and IL-6.”**

How else does curcumin support the liver in relation to its detoxification functions?

**“Curcumin has been found to have protective effects on chemical-induced hepatic cytochrome P450 damage in rats. Chronic administration of CCl<sub>4</sub> decreased cytochrome activity especially CYP2E1, which is involved in the bioactivation of CCl<sub>4</sub>, thereby producing reactive free radicals. Curcumin alleviates the CCl<sub>4</sub>-induced activation of CYP1A, 2B, 2C and 3A isoenzymes...”**

Concerning the antioxidant activity of curcumin, Girish and Pradhan state:

**“Curcumin, being an antioxidant, inhibits lipid peroxidation in rat liver microsomes, erythrocyte membrane and brain homogenates. Turmeric can lower lipid peroxidation by maintaining the activation of antioxidant enzymes like superoxide dismutase, catalase and glutathione peroxidase at higher levels. Curcumin is capable of scavenging oxygen free radicals, such as superoxide anions and hydroxyl radicals, which are important for the initiation of lipid peroxidation.”**

The bioavailable form of curcumin, Meriva<sup>®</sup>, not only makes **HepatoDetox Select<sup>™</sup>** an excellent general liver support product but an outstanding product to support one of the most important functions of the liver in chronically ailing individuals, detoxification.

**HepatoDetox Select<sup>™</sup> - Moss Nutrition**

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