

HOPSTEINER – NEWSLETTER

JULY 2011

TECHNICAL SUPPORT




Hopsteiner®

COMMITTED TO THE BREWER.

Hops and Health

One of the most widely known and studied medicinal properties of hops is its ability to induce sleep. In the European HMPC (Herbal Medicinal Product Committee) Monographs hops are officially recommended as traditional herbal medicinal product for relief of mild symptoms of mental stress and to aid sleep.

Scientific findings point to the possibility of hops becoming even more widely used in the future - both as medicines as well as dietary supplements. In particular the hop polyphenol Xanthohumol is showing an extraordinarily broad range of different, positive activities. Most of the supporting experiments have been carried out "in vitro" with isolated cells or enzymes but very recently some of these activities could be confirmed "in vivo" by animal trials. Three examples are presented below and the conclusions of the authors are given:

1. Ferk, F. et al. (Mutation Research 691, 2010, 17–22: Xanthohumol, a prenylated flavonoid contained in beer, prevents the induction of preneoplastic lesions and DNA damage in liver and colon induced by the heterocyclic aromatic amine amino-3-methyl-imidazo[4,5-f]quinoline):
"Our findings indicate that XN protects against DNA damage and cancer induced by the cooked food mutagen. Since the effects were observed with low doses of XN which are reached after consumption of brews with high XN levels, our findings may be relevant for humans."
2. Radovic, B. et al. (Molecular Nutrition and Food Research 2010, 54, 225-235: Xanthohumol, a prenylated chalcone from hops, modulates hepatic expression of genes involved in thyroid hormone distribution and metabolism):
"The XN-dependent altered expression of components involved in thyroid hormone homeostasis might be important not only for hormone metabolism, but also for hepatic phase I and II elimination of drug metabolites and xenobiotics."
3. Stracke, D. et al. (Molecular Nutrition and Food Research 2011, 55, 485-494: Inhibitors of hyaluronan export from hops prevent osteoarthritic reactions):
"Xanthohumol may be a natural compound to prevent hyaluronan overproduction and subsequent reactions in osteoarthritis."

The results and conclusions of these experiments are confirming that Xanthohumol also shows a broad range of promising activities "in vivo". Ultimately it will be necessary to prove the potential of Xanthohumol by studies with human subjects. All three above mentioned research groups are now planning to start such clinical trials. Hopsteiner will be involved in these projects as supplier of the specified quality of Xanthohumol enriched hop products.

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Pure Xanthohumol

