The female inflorescences (cones) of the hop plant (*Humulus lupulus*) are rich in terpenoid essential oils and resins, which are synthesized in glandular trichomes. In addition to components that give beer a characteristic flavor, hop cones contain a significant amount of xanthohumol, a prenylchalcone with cancer-preventive properties. Nagel et al. (pages 186–200) present an EST analysis of glandular trichomes from high-xanthohumol hop cultivars to investigate the biosynthesis of xanthohumol and other trichome metabolites. Their analysis identified O-methyltransferase OMT1 as the major enzyme catalyzing the final step in xanthohumol biosynthesis in hop cones and expands genomic resources available for *H. lupulus*.

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