

Phytocannabinoids beyond the *Cannabis* plant – do they exist?

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Abstract

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It is intriguing that during human cultural evolution man has detected plant natural products that appear to target key protein receptors of important physiological systems rather selectively. Plants containing such secondary metabolites usually belong to unique chemotaxa, induce potent pharmacological effects and have typically been used for recreational and medicinal purposes or as poisons. *Cannabis sativa* L. has a long history as a medicinal plant and was fundamental in the discovery of the endocannabinoid system. The major psychoactive *Cannabis* constituent Δ^9 -tetrahydrocannabinol (Δ^9 -THC) potently activates the G-protein-coupled cannabinoid receptor CB₁ and also modulates the cannabinoid receptor CB₂. In the last few years, several other non-cannabinoid plant constituents have been reported to bind to and functionally interact with CB receptors. Moreover, certain plant natural products, from both *Cannabis* and other plants, also target other proteins of the endocannabinoid system, such as hydrolytic enzymes that control endocannabinoid levels. In this commentary we summarize and critically discuss recent findings.

This article is part of a themed issue on Cannabinoids. To view the editorial for this themed issue visit <http://dx.doi.org/10.1111/j.1476-5381.2010.00831.x>

Keywords: phytocannabinoid, cannabinoid, plant natural products, *Cannabis*, endocannabinoid system