

Cutting-Edge Compounds: Piceatannol

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Piceatannol¹ is a metabolite of the powerful phytochemical resveratrol, which is a polyphenolic compound found in grape skins, bilberries, blueberries, cranberries and peanuts. [Resveratrol](#) has been studied for its effects on longevity, heart disease and cancer by its *in-vitro* ability to increase vasodilation and reduce platelet aggregation, oxidation and pro-inflammatory enzyme activity. The compound has increased the lifespan of yeast, worms and fruit flies.

Animal studies have been promising for the inhibition of some lines of cancer cell growth. Animal studies on heart disease have been mixed with high doses showing both benefit and harm.² However, two of the world's five documented zones of extreme longevity consume dark red wine that is very high in polyphenolic compounds including resveratrol. Once ingested, some resveratrol is converted to piceatannol.

Recently, researchers at Purdue University discovered that piceatannol blocks the development of immature fat cells into mature fat cells (a process called adipogenesis) by binding to their insulin receptors.³⁻⁴ Without insulin, the genes that promote the growth of baby fat cells (which cannot store fat) to adult fat cells (which *can* store fat) are never activated.

More research is needed and we won't be seeing any products anytime soon, but the beauty and simplicity of the process made it worth writing about. Needless to say, the implications for such a supplement are beyond huge. In the meantime, it's another reason to suggest your patients toss some red grapes and [blueberries](#) in their smoothies and protein shakes.

References

1. Piceatannol: Product Identification.
<http://chemicaland21.com/lifescience/uh/PICEATANNOL.htm>
2. [Micronutrient Information Center: Resveratrol](#). Linus Pauling Institute, Oregon State University.
3. "Potential Method to Control Obesity: Red Wine, Fruit Compound Could Help Block Fat Cell Formation." [ScienceDaily](#), April 4, 2012/
4. Kwon J-Y, et al. Piceatannol, natural polyphenolic stilbene, inhibits adipogenesis via modulation of mitotic clonal expansion and insulin receptor-dependent insulin signaling in early phase of differentiation. *Jrnl Bio Chem*, 2012;11566-11578.

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