Medicinal & Aromatic Plants
ISSN: 2167-0412

Colman, Med Aromat Plants 2015, 4:4
http://dx.doi.org/10.4172/2167-0412.1000206

Commentry Open Access

A Commentary on Resveratrol

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Introduction

Resveratrol is a grape vine phenolic compound found in seventy two plant species. It was first discovered in 1939 and is classified as a stilbene because of its structure and termed a phytoalexin because of its protective effects against infections in plants. Resveratrol was named after Veratrum grandiflorum when it was isolated from the root of that vine. It is found in nature both in the cis-and trans-form, where the cis-form predominates. As a supplement, resveratrol is extracted from the Japanese knotweed, or the Itadori plant.

Research with resveratrol has expanded over the last two decades to the point where two international conferences have been conducted over its diverse effects in animals and humans. This has attracted the attention of the worldwide medical community. Resveratrol has been suggested to have cardioprotective effects and improve metabolic function based on compelling *in vitro* and animal studies.

A number of human clinical intervention trials have been initiated as a result of resveratrol's promising preclinical results. However, human data is scarce and many claims have been made about resveratrol, making it a controversial subject.

It is unclear whether resveratrol's biological effects can be attributed to its antioxidant, calorie restriction mimetic, anti-inflammatory or other effects, and independent research is now exploring each pathway.

Resveratrol is found in red wine and it has been suggested that it plays a role in the 'French Paradox' effect where consumption of red wine seems to improve cardiovascular outcomes in the French population despite a high fat diet. In fact the 'French paradox' it drew the attention of researchers to resveratrol in the first place.

Two French investigators, Renaud and de Lorgeril proposed that moderate wine consumption explained the discrepancy where the ratio of cardiovascular mortality was found to be two to three times lower in France than in the US, England and Sweden. This was later confirmed in a Copenhagen study of 13,285 men and women aged 30 to 70 years where moderate wine intake was associated with lower cardiovascular and cerebrovascular diseases.

The active polyphenols in red wine include anthocyanins, which give it its color, flavanols, like quercetin, phenolic acids, such as gallic acid and the stilbene, resveratrol.

Each of these wine compounds is being researched extensivley, but a special emphasis is being placed on resveratrol.

Resveratrol and Aging

Resveratrol is the first molecule that consistently slows aging across the board in unrelated species-yeast, roundworms, fish and fruitflies-and this effect has been noted in different laboratories.

The most notable lifespan extension effects of resveratrol is on short-lived fish, increasing lifespan 56% to 59% when fed at two low doses. The first lifespan study with resveratrol was conducted in 2003 in yeast resulting in a 70% increase in yeast lifespan.

Diverse cultures, such as the Japanese and Mediterranean populations eat and drink greater amounts of resveratrol, for example, from wine and foods higher in polyphenols. No conclusions should be drawn as to whether resveratrol affects human lifespan, but resveratrol appears to support healthy circulation and metabolic health in some preliminary human trials.

Resveratrol Supplements

Different supplements are being sold with vastly different amounts of resveratrol in them today. Some suppliers claim to have synergy of resveratrol with pine bark or other extracts, but there is very little human trial science on additive or synergistic effects of resveratrol.

Buyers should focus on the amount of resveratrol in each capsule rather than the other ingredients mixed in it-resveratrol may already have additive or synergistic effects with multivitamins or other supplements already being taken.

The prices on resveratrol vary greatly, partly because it is sold in capsule amounts from 50 mg. to 500 mg, different bottle count and sold with other extracts added to it.

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Received June 22, 2015; **Accepted** September 07, 2015; **Published** September 10, 2015

Citation: Colman J (2015) A Commentary on Resveratrol. Med Aromat Plants 4: 206. doi:10.4172/2167-0412.1000206