

# resVida<sup>®</sup>

## Health benefit solution



### What is resVida<sup>®</sup>

resVida<sup>®</sup> is a high purity resveratrol (99% of pure trans-resveratrol). resVida<sup>®</sup> is free of impurities such as Emodin or herbicides and pesticides like Anthraquinone. Resveratrol is a polyphenol present in various foods predominantly in grapes and red wine. Resveratrol is believed to be responsible for the so-called *French Paradox*, the fact that French people – who consume a high-fat diet – maintain relatively low mortality rates from coronary heart disease compared to other western countries. Their moderate but regular consumption of red wine is a contributing factor in explaining this paradox.

### Mechanism of action

Resveratrol is a potent antioxidant that reduces harmful reactive oxygen species which can lead to premature aging of cells. Resveratrol further acts by upregulating multiple endogenous antioxidant enzymes such as e.g. SOD.

*In vitro* and *in vivo* studies have demonstrated many health benefits for resveratrol. Identified mechanisms of action relate to the maintenance of a healthy cardiovascular system as well as a normal metabolic function which includes the maintenance of healthy blood glucose and insulin activity.

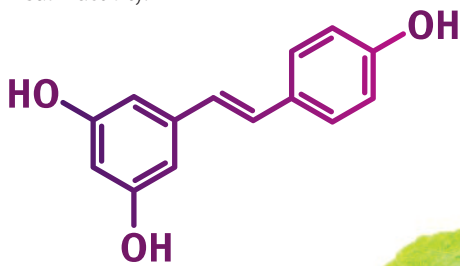
### Efficacy

Numerous scientific publications show that resveratrol can contribute to:

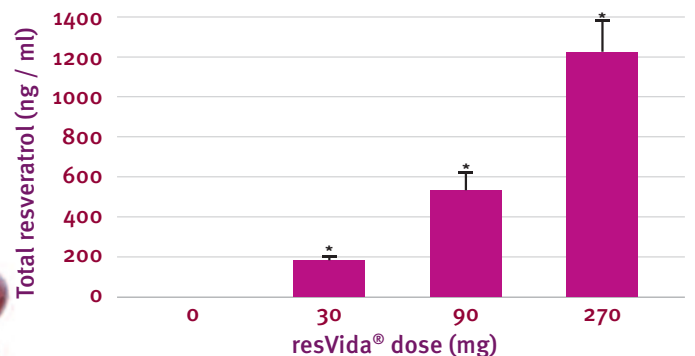
- maintenance of a healthy cardiovascular system
- maintenance of neurocognitive function
- an improvement of age-associated decline of metabolic and sensory-motor coordination function

../continued overleaf

- Proven bioavailability and safety
- Proven efficacy in humans
- Improves vascular and metabolic health
- Structure function claims
- High purity and consistent quality



Resveratrol plasma concentration (60 minutes after resVida<sup>®</sup> supplementation) was significantly increased with each dose



Mean +/- SEM \* p<0.0001 vs. plc Wong et al., Nutr Metab Cardiovasc Dis 2011

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### ...Efficacy continued

resVida<sup>®</sup> resveratrol comes along with an unmatched set of human data and has been demonstrated to:

- be bioavailable
- be efficacious at low dose
- maintain healthy blood pressure
- maintain healthy blood glucose and insulin activity
- induce endurance training-like effects in muscle such as increased fat oxidation and fat storage capacity
- mimic the metabolic benefits of calorie restriction

Overall scientific evidence indicates that resVida<sup>®</sup> promotes healthy aging.

### Safety

resVida<sup>®</sup> resveratrol is a consistent, quality product free of pesticides and herbicides. The safety of resVida<sup>®</sup> has been evaluated in a comprehensive battery of safety studies that is unmatched by any other form of resveratrol and has been demonstrated in human studies to be well tolerated.

### Applications

DSM's resVida<sup>®</sup> is a 99% pure trans-resveratrol that is highly versatile and is ideally suited for a broad range of food, beverages and dietary supplement applications including fruit and vegetable juices, health bars, breakfast cereals, capsules, tablets, softgels and powders.

DSM's resVida<sup>®</sup> is supported by FDA-acknowledged structure function claims and has obtained self-affirmation GRAS status for functional food applications.



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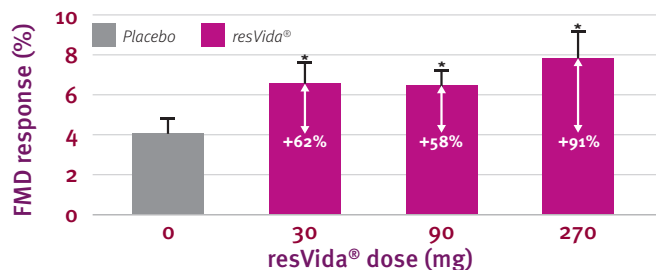
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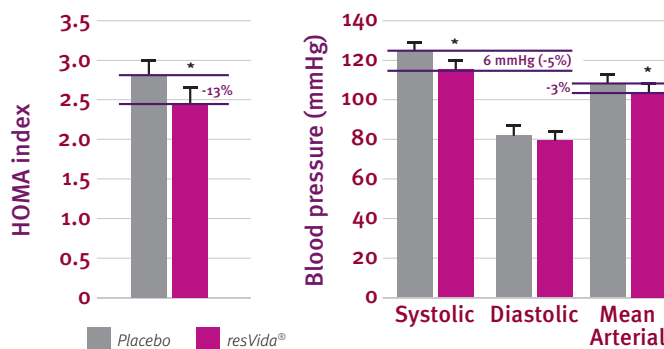
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### resVida<sup>®</sup> significantly improved vascular reactivity in humans



Mean +/- SEM \* p<0.05 vs. plc Wong et al., Nutr Metab Cardiovasc Dis 2011

### resVida<sup>®</sup> improved insulin sensitivity in humans (HOMA index) and reduced blood pressure



Mean +/- SEM \* p<0.05 Timmers et al. Cell Metabolism 2011

### Effects of resVida<sup>®</sup> compared to calorie restriction

Parameter	Calorie restriction		Resveratrol	
	Rodents	Humans	Rodents	Humans
Body weight	Decrease	Decrease	Decrease	Similar
Insulin	Decrease	Decrease	Decrease	Decrease
Energy expenditure:				
Total	Decrease	Decrease	Increase	Similar
Postprandial	Decrease	Decrease	Unknown	Decrease
Sedentary / sleep	Decrease	Decrease	Unknown	Decrease
Fat mass and fat-free mass	Decrease	Decrease	Decrease	Unknown
Liver fat	Decrease	Decrease	Decrease	Decrease
Intramyocellular lipids	Decrease	Decrease	Decrease	Increase
Insulin sensitivity	Increase	Increase	Increase	Increase
Inflammation markers	Decrease	Decrease	Decrease	Decrease
Mitochondrial efficiency	Increase	Increase	Increase	Increase

▼ Decrease ▲ Increase ■ Similar ? Currently unknown

Timmers et al., Cell Metab 2011, Suppl Info

