

More evidence that grape juice may ‘reverse’ brain aging

23/02/2006- Drinking Concord grape juice appears to reverse the course of neuronal and behavioural aging in rats, an effect that is proposed to be due to the complex mix of polyphenols.

Concord grape juice is a rich source of polyphenols, potent antioxidants that ‘mop up’ harmful reactive oxygen species that have been identified as key to the aging process. Previous research has linked polyphenols, such as catechins, epicatechins, and anthocyanins to protecting against various cancers and heart disease.

“It may be that the whole is greater than the sum of its parts,” said lead author Barbara Shukitt-Hale.

The new study, published in the journal *Nutrition* (Vol. 22, pp. 295-302), supports previous work on the subject. The researchers, from the Human Nutrition Research Center on Aging at Tufts University, studied the effect of 10 and 50 per cent concord grape juice on the behavioural and neuronal functions of 45 mature male rats.

The scientists used 10 per cent grape juice in order to have an equivalent amount of Concord grape juice per body weight per day as previous human clinical trials, making the research comparable with human trials.

The total polyphenol concentration of the 10 and 50 per cent juices were 255 and 1,098 mg per litre of gallic acid equivalents.

The rats were randomly assigned to one of three groups: placebo/control group (only drinking water); the 10 per cent juice group; and the 50 per cent juice group. Diets were calorically equivalent for the three groups.

After six weeks the rats were tested for motor skills, and after eight weeks cognitive testing occurred.

“The rats that consumed the 10 per cent and 50 per cent grape juices performed significantly better on the behavioural tests than did control rats,” reported Shukitt-Hale.

In terms of cognitive performance, the researchers observed that the 10 per cent group performed better than the control and 50 per cent juice group.

“These findings suggest that it may take a higher concentration of grape juice to enhance motor performance, whereas lower concentrations may be sufficient to alter cognitive performance,” said Shukitt-Hale.

While previous studies have identified specific polyphenols that have a direct effect on cell signalling, such as resveratrol, the researchers suggest that the effects of the Concord grape juice may be due to the mixture of polyphenols present.

“The entire grape, which is a mixture of many different polyphenols, may be more effective than any one single component because individual polyphenols might exert their effects through different and/or independent mechanisms,” wrote Shukitt-Hale.

Gerber Foods, distributor of Welch's purple grape juice in the UK, announced at the end of 2005 that it had been approved by the heart health charity Heart UK, and will carry the body's logo on its packaging.

The Concord grape juice has been shown to reduce the oxidation of LDL (bad) cholesterol