

## **NATURAL MEDICINE: MEDICINAL VALUE OF MUSCADINE GRAPE SEED POWDER FOR HEALTH CHALLENGES**

**By Dr. Michael John Badanek, BS, DC, CNS, CTPP, DACBN, DCBCN, MSGR./CHEV**

The prominent natural phenolic compounds in muscadine grape skin are Ellagic Acid, Myricetin, Quercetin, Kaempferol and Resveratrol.

Ellagic acid is also found in strawberries as well as pomegranate; however, muscadine grape skin has much higher levels. Ellagic acid has excellent free-radical scavenging activity. It has shown to have activity against a number of different types of cancer cells including lung, esophageal, prostate, refractory prostate cancer, breast cancer and colon cancer.

Myricetin is a polyphenolic antioxidant. Myricetin along with Resveratrol, Piceantannol, Quercetin and Kaempferol have been shown to have activity against formation of B-amyloid fibrils and has excited researchers as a potential thwart to Alzheimer's disease (accumulation of amyloid in the brain is a significant part of Alzheimer's disease).

Myricetin as well as Quercetin, Kaempferol, and Resveratrol have been implicated as the key compounds responsible for the effectiveness of grape powder in exerting a cardio-protective effect in pre and post menopausal women, by lowering plasma lipids, and reducing oxidative stress. Myricetin, Quercetin, Kaempferol, Resveratrol, and Piceantannol have been shown to enhance bone formation experimentally. This may have implications in preventing osteoporosis. Resveratrol has been shown to reverse the osteoporosis induced by cigarette smoking and to inhibit myeloma cell growth while preventing osteoclast (bone resorbing cells) activity and promoting osteoblast (bone forming cells) activity. The active form of Resveratrol, Piceantannol stimulates osteoblast differentiation mediated by bone morphogenic protein-2 (BMP-2) production. Myricetin has also been shown to stimulate BMP-2, osteoblast formation and holds promise for the ability to increase bone mass.

The use of these muscadine grape polyphenols (along with Quercetin, Kaempferol, Resveratrol and Piceatannol, which are prominent in grape skins) has been shown to have particular potential benefits in addressing climacteric

(menopause) syndrome as well as in prostate health, as well as their anti-carcinogenic , neuro-protective, cardio-protective, and bone-forming properties.

Kaempferol is a plant-derived polyphenol that not only protects blood fats from oxidation, but also prevents atherogenesis (initiation and buildup of plaque in the arteries – the basic process which causes heart attacks and strokes). If blood fats are oxidized, they enter the cells of the artery easily and cholesterol will build up to block the flow of blood. Kaempferol also induces apoptosis (cell death) in glioblastoma ( a malignant brain tumor). Kaempferol has been shown to suppress the growth of a number of human malignancies.

Quercetin has been shown to lower blood pressure in patients with high blood pressure, to protect against mercury, toxicity, as well as having some alleviating effect for chronic prostatitis-chronic pelvic pain syndrome. Together with Resveratrol, Quercetin has been shown to reduce apoptotic neuronal cell death by its anti-inflammatory properties (this may be relevant to Parkinson’s disease). Quercetin has also been shown to be cardio protective. It has been shown to protect heart cells from the toxicity of drugs used for treating cancer that have cardiac toxicity as a side effect.

Work at the National Cancer Institute has shown an inhibition of prostate cancer cell growth by muscadine grape skin. Skin inhibition was found to be independent of the prostate cancer cell inhibition by Resveratrol. The muscadine grape skin powder contains both these prostate cancer fighting components. The authors of this finding have recommended that it is an important source for further development of a chemo-preventative or a therapeutic agent against prostate cancer. This work and the work of others have resulted in a human clinical trial for prostate cancer.

All the information presented in this brief report is based on published scientific research which is available from searches using “PUBMED”.

**Dr. Badanek has been and currently is 37 years into active/private practice in the Ocala/Marion County, Florida region. Dr. Badanek practices Natural/Holistic Medicine through the use of Functional/Integrative Models for diagnostic and treatment protocols for the health challenged. Find him online at Dr.Badanek.com and www.alternativewholistic.com, and see what the facility has to offer the sick and health challenged. To schedule an appointment call 352-622-1151**