Title: Biochemical effects of Pomegranate on cancer

Presenters: Ellie Wright, NMD, William Nelson, NMD Naturopathic Medical Doctors of AZ. Tempe, AZ,

Abrstract: Pomegranates have been shown to contain over 100 different phytochemicals, including ellagitannins, punicic acid, flavonoids, anthocyanidins, estrogenic flavonols, and flavones. The highest concentration of ellagitannins are in the fresh prepared juice. Recent research shows remarkable results in reducing artherosclerosis, obesity, insulin resistance, intestinal inflammation, and cancer. Pomegranate has been shown to have breast cancer preventive effects through modulation of endogenous sex hormone levels. *Ellagitannins* prevents *estrogen-responsive breast cancer* by inhibiting the growth of cultured breast cancer cells. Ellagic acid also inhibits the enzyme known as aromatase that converts androgen to estrogen hormones. The anti-cancer effect is also expressed through inhibition of vascular endothelial growth factor (VEGF) that promotes new vasculature and tumor growth and metastasis. Pomegranate juice lowers the risk of a cancer through inhibiting several of the cytochrome P450 enzyme that can activate carcinogen metabolites. Urine. Pomegranate are rich in fatty acids (80%) specifically conjugated linolenic acids (cLNA) which present the anti inflammatory and anti cancer effects) Research shows pomegranate is antiproliferative, anti-invasive, and antimetastatic by inducing apoptosis and blocking the activation of inflammatory pathways. These mechanisms of anti-inflammatory, anti-cancer and anti-angiogenesis are expressed through inhibition of cyclooxygenase (COX), lipooxygenase (LOX), cytochrome P450 (CYP450) and last but not least the master inflammatory switch in the body NF-kB.

Biography. Dr. Ellie Wright is a recent graduate of Southwest Naturopathic Medical school in Tempe, AZ. Dr. William Nelson has a BS in Engineering from Michigan State and attended National College of Naturopathic Medical School in Portland, OR. Dr Nelson has 20 years of experience in private practice and specializes in the metabolic treatment of cancer. Currently, Dr. Nelson is on staff at Naturopathic Medical Doctors of Arizona which is the largest Naturopathic Cancer Clinic in the US.