Poster #34

Antioxidant Activity of Soybean Phytoalexins

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The flavonoid family of phytochemicals, particularly those derived from soy, has received attention regarding their antioxidant activity as well as their effects on human health and disease. Several studies have focused on the radical-scavenging activity of isoflavones and anthocyanins found in the cotyledons, hypocotyls, and seed coats of certain soybean cultivars. The types and amounts of these compounds in soybean and other plants are controlled by both constitutive expression and stress-induced biosynthesis. Earlier research has shown the glyceollins induced during plant stress are antiestrogenic in several *in vitro* assays and bind preferentially to ERα. The aim of this study was to identify unique phytochemicals that had not been previously assessed for antioxidant activity. Several soybean extracts will be prepared from seeds prepared under different growing conditions. The 1,1-diphenyl-2-picrylhydrazyl (DPPH) scavenging activities of these soybean extracts will be investigated. Our goal in this study was to investigate the effect of soybean phytoalexins induced during stress on radical-scavenging activity.

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