Lectins of *Sambucus nigra* as Biologically Active and DNA-protective Substances

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> **…The aim of our work is to present a review of own results and literature data concerning DNA-protective potential of *Sambucus nigra* biologically active compounds named lectins, a very large group of universally occurring proteins that recognize and specifically bind to carbohydrates / glycoconjugates…lectins participate in host defense in plants against stress-related conditions, the attack of phytopathogens and phytophagous insects, as well as modulation of immune response, mitogenic stimulation or induction of apoptosis in animals. Antiviral, immunomodulating, antioxidant and insulin-stimulating properties of *S. nigra* fruit and flower extracts have been described in scientific literature. Also, the elderberry lectins were found in roots, leaves, bark, seed and fruits, with SNA-IV being the predominant protein in the juice…**
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> ***Sambucus nigra* lectins demonstrated the protective and antimutagenic effects against heavy metals (nickel ions) in the soil bacteria *Bacillus subtilis*. Also, it was shown that lectins under study can modulate in a concentration-dependent manner the frequency of mutations and genotoxic activity of alkylating agents in eukaryotic cell cultures…The results obtained give reason to conclude that the protective functions of lectins both in pro- and eukaryotes involve complex mechanisms including components of DNA repair system.**

Ukrainian researchers have investigated various ways to treat the effects of the Chernobyl radiation disaster. Here indications for use in treating the potential genetic damage from heavy metals present in one's body were derived from lab tests with soil bacteria. Some natural healing practices include the use of elderberry fruit and flower extracts in treating an excess of heavy metals in humans, so consumers should check with their medical professional for further guidance if concerned about symptoms possibly related to an excess of heavy metals.