

## Allelopathic Plants. XVIII. *Solanum nigrum* L.

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### ABSTRACT

*Solanum nigrum* is a noxious weed worldwide and increasingly resistant to herbicides. It produces several alkaloids, flavonoids, saponins, sapogenins and hydroxycinnamic acid amides. Secondary chemicals produced by *S. nigrum* are fungitoxic and phytotoxic but their inhibitory effects are more intense to crops than to weeds. On the other hand, common phenolic acids, extracts and residues of several crop species can be inhibitory to germination and early growth of *S. nigrum* but, when comparative studies are available, crops are more sensitive than *S. nigrum*. However, single compounds derived from microbes like hydantocidin, phosphinothricin, AAL-toxin, fumonisins, colletotrichin, as well as the phytochemical sorgoleone, were found to affect various aspects of *S. nigrum* metabolism and, therefore, offer sound prospects for bioherbicide control of this weed.

**Keywords:** AAL-toxin, alkaloids, allelochemicals, allelopathy, antagonism, bioherbicides, black nightshade, colletotrichin, flavonoids, fumonisins, fungitoxicity, germination, herbicide resistance, hydantocidin, phenolics, phosphinothricin, sapogenins, saponins, *Solanum nigrum*, weed control.

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