

***Panax* (Ginseng)—Panacea or Placebo? Molecular and Cellular Basis of its Pharmacological Activity**

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Abstract

Introduction: The use of ethnobotanical drugs amongst Asians as complementary medicine is prevalent and is also gaining increasing popularity in the West. The most well known herb traditionally used as a drug is the root of the ginseng species. There are many traditional and anecdotal claims to the therapeutic properties of ginseng. In recent years, there have been systematic efforts to analyse the bioactivities of ginseng saponins. ***Methods:*** A comprehensive review of published literature covering molecular and cellular research as well as animal and human studies on ginseng and its derivatives. ***Results and Conclusion:*** Current published data would serve as a framework to understand the pharmacology of ginseng in its entirety, from its molecular action to actual therapeutic effects observed in human use. A new paradigm is emerging whereby the pharmacological effects of traditional herbs such as ginseng can be understood in the light of their polyvalent actions as demonstrated by ginseng saponins with their positive anti-mutagenic, anti-cancer, anti-inflammatory, anti-diabetes and neurovascular effects. With increasing understanding, evidence-based incorporation of traditional herbs as complementary medicine into mainstream medical science can be achieved in the near future.

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