

Supplemental Table 1. Ingredients and effects of the Shen cao formula

Latin name	Main chemical composition	Described effects of the main chemicals (effects on blood are marked bold)
<i>Adenophora stricta</i> (dry root)	Coumarins, glycosides, volatile oils, lignans, polyacetylene, amino acids, trace elements.	Immunoregulation, antitussive and expectorant, anti-mutation, anti-carcinogenic and anti-tumor, anti-bacterial and anti-fungal, anti-oxidant.
<i>Dendrobium nobile</i> (stem)	Polysaccharides, alkaloids, phenanthrene compounds, amino acids	Enhance the body immunity and anti-aging, anti-tumor, hypoglycemia.
<i>Agrimonia pilosa</i> (entire plant without roots)	<i>Agrimonia pilosa</i> contains certain chemical components such as agrimonolide, coumarin, tannins, as well as flavonoids, phenylpropanoids, and triterpenes	Anti-tumor, hypoglycemic, analgesic, anti-inflammatory, hemostasis, blood pressure lowering, antiarrhythmia, antimalarial and insecticidal effects, effect on platelet aggregation, coagulation function and hemorheology [25]
<i>Lithospermum erythrorhizon</i> (root)	The enzyme 4-hydroxybenzoate geranyltransferase utilizes geranyl diphosphate and 4-hydroxybenzoate to produce 3-geranyl-4-hydroxybenzoate and diphosphate. Biosynthetically, alkannin is produced in plants from the intermediates 4-hydroxybenzoic acid and geranyl pyrophosphate. This enzyme is involved in shikonin biosynthesis	Contraceptive, anti-virus, anti-inflammation, anti-tumor, liver protection effects Extracts of ethyl acetate from Xinjiang Lithospermum erythrorhizon can significantly shorten CT (Clotting Time), BT (Bleeding Time), increase platelet count, shorten thrombin time (TT), and increase fibrinogen content (FIB) [26]
<i>Eclipta prostrata</i> (entire plant)	<i>Eclipta prostrata</i> contains various phytochemicals, such as coumestans, polypeptides, polyacetylenes, thiophene derivatives, steroids, sterols, triterpenes, and flavonoids.	Effects on cardiovascular system, effects on central nervous system, antimicrobial effect, inhibition of hemorrhagic activity [27]
<i>Lycium chinense</i> (fruits, leaves and roots)	The fruit's composition is similar to that of <i>L. barbarum</i> . Polysaccharides, carotenoids and flavonoids are the typical metabolites. Rutin is the main flavonoid. The main carotenoid is zeaxanthin dipalmitate (49% of the carotenoid fraction). The fruit further contains zeaxanthin, β -carotene, two cerebrosides, and three pyrrole derivatives	Regulation of non-specific immune function, regulation of specific immune function, antioxidation, anti-aging, hypolipidemic, hypoglycemic, anti-tumor, anti-mutagenic effect.
<i>Carapax Testudinis</i> (ventral and dorsal armour of chinemys reevesii)	Contains animal gelatin, Keratin, Fat, calcium, phosphorus, Asparagic acid) Threonine, Serine, Glutamic acid, Proline, Glycine, Alanine, Cysteine, Valine, Methionine, Isoleucine, Leucine, Tyrosine, Phenylalanine, Lysine, Histidine, Arginine, Tryptophane	Effects on immune function and reproductive system; anti-tumor; pathological model of animal "Yin deficiency" syndrome.

