

Review of: "[Review Article] A Comprehensive Overview on Pharmacological and Therapeutic Insights of *Solanum nigrum* Linn"

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Potential competing interests: No potential competing interests to declare.

Overall, the manuscript is good; however, there are a few more inputs that would make it better.

1.2. Botanical Description

Introduce Table 1, as well as Figure 1, in the text.

Label the photos under Figure 1 as A, B, C, and D, and indicate which one is which in your legend.

Under research methods, line 4, remove all quotation marks for each and just use one as an umbrella.

These are treatments for bronchitis, pulmonary tuberculosis, asthma, and diuretics.

Sentence needs revision; does not make sense; rephrase.

It would be nice to also include the native names from the different countries.

2. Traditional uses and phytochemistry

Rephrase line 5: The leaves were utilized as a poultice to treat gouty or rheumatic joints (change to are).

This line needs revision; does not make sense: These are treatments for bronchitis, pulmonary tuberculosis, asthma, and diuretics. (Which treatment are you referring to?)

Rephrase this sentence: *S. nigrum* comprehends several bioactive phytoconstituents such as glycoalkaloids, glycoproteins, polysaccharides, and polyphenol substances with significant pharmacological properties

to Several bioactive phytoconstituents, including polysaccharides, glycoproteins, glycoalkaloids, and polyphenol compounds having noteworthy pharmacological effects, are isolated from *S. nigrum*.

The following structures highlight some of the most prevalent and significant phytochemicals. (Were these isolated from *S. nigrum*? If so, mention it here.)

Label the different phytochemical structures as **Figure 2**,

3. Detailed pharmacological and therapeutic potentials

There is no need to highlight your references.

Secondly, you don't have to mention the detailed methods used; rephrase as follows:

N. S. Aali et al., (2010) investigated the antidiabetic potential of ethanolic extracts on albino rats for a period of five to seven days, and the findings alluded to a noticeable decline in the amount of sugar in the blood. Similarly, S. Meonah et al., (2012) studied the aq. and hydroalcoholic stem extracts for their antidiabetic efficacy in rats, and the results revealed no hypoglycaemic activity. In another report, J. Sugunabai et al., (2014), conducted a study on a group of male patients, aged 35-60, for 90 days to check the efficacy of aq. extract for their hypoglycemic and hyperlipidemic activities. Results showed the level of glucose, LDL, triglyceride, and glycosylated haemoglobin was reduced by 19%, 8%, 17%, and 10%, respectively, and HDL was increased by 2%. Alkaloids possibly increased insulin secretion, and glycoprotein increased the activity of antioxidant enzymes [22]. M. Umamageswari et al., (2017), conducted a study to estimate the hypoglycaemic effects of *S. nigrum* berries in alloxan-induced diabetic mice. The animals were treated with AESNB 200 and 400 mg/kg and standard, i.e., 0.1 mg/kg of glimepiride. The results provided clear evidence that the dosage of 400 mg/kg per day formed a substantial drop ($P<0.001$) than 200 mg/kg/day ($P<0.01$) [23].

3.2. Hepatoprotective activities:

Rephrase the same as above.

Same comment as above, no need for a detailed explanation of methods.

According to the study, the herb was hepatoprotective (Report must be in the past tense).

There are claims that an extract of the *S. nigrum* fruit is more effective at treating liver damage than the plant itself (Which extract are you referring to here?)

Culex quinquefasciatus: italics

3.3. Anti-stress activities

Findings suggest that *S. nigrum* might (suggested) report in past tense

3.4 Anti-larvicidal activities

Methanol (1/1% v/v) extract had remarkable (past tense)

The results showed that the AgNPs of *S. nigrum* (Showed)

It seems under this section you only cited Rawani et al.; were there no other studies reported by other authors?

It is possible that the isolated phytochemical will prove to be an effective mosquitocidal agent (past tense)

3.5. Anti-estrogenic activities

competitive binding assay using 3H-E2 demonstrates a rise with (Past tense)

The finding reveals that methanol (Past tense)

3.6. Anti-viral/ HCV activities

The findings suggest that the seeds extract (Past tense)

and that using the extracts in conjunction with interferon is a more effective strategy to treat chronic HCV: rephrase to may be the most effective strategy to treat chronic HCV.

3.7. Anti-seizure/ anti-convulsant activities

Same comment as above, no need for a detailed explanation of methods.

K. Ruby et al. (2012) evaluated the CNS-depressing action of *S. nigrum* by injecting it intraperitoneally. Isotonic contraction of the rectus abdominis muscle was observed in the solitary toad. The toad heart had a detrimental influence on the chronotropic and inotropic systems. The rat jejunum exhibited isotonic contraction. The cat's BP was reduced:
(Write in the past tense)

According to the findings, the ethanolic extract of *Solanum* possesses (Write in the past tense)

3.8. Cytotoxic activities

Same comment as above, no need for a detailed explanation of methods.

3.11. Anti-cancer activities

Same comment as above, no need for a detailed explanation of methods.

And write in the past tense

Do the same with the subsequent sections(3.12 to 3.27)

4. Clinical trials

There is no need to have subsections 4.1 – 4.6, write it like the previous sections for consistency, in just a paragraph form.

This section of the review is nicely written. Follow the same pattern to write the whole review.

5. Marketed Formulations

Introduce Table 3

6. Patents

Preparation with herbs	<i>S. nigrum</i> , <i>Amygdalus persica</i> , <i>Carthamus tinctorius</i> , <i>Coix lacryma</i>	Llung and colon cancer	CN113398215A
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This herb also promotes brain and CNS health (write abbreviation in full.)

7. Results and Discussions

This strategy has several therapeutical potentials (Which strategy are you referring to?)