

Phyto-pharmacological and Patented review on *Pelargonium sidoides*: A Review

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Abstract:

P. sidoides is a plant basically originating in South Africa, is a healthful plant thought to be effective in the management of respiratory tract infection. There are various pharmacological actions reported for this plant. There are various constituents reported in roots, stem, leaves of this plants, which are proved to be effective against respiratory tract infections, viral and bacterial infections, social disorders etc. Various patents have also been filed for this plant. The following review shows the various pharmacological actions, toxicology, constituents and patented pharmacological studies of the plant.

1. Introduction

Ancient plants have gotten important attention in world health. Herbal drugs plays an outstanding role within the strategy to contain and treat severe acute metastasis syndrome (SARS) [1] [2] [3]. Herbal medicine represent a serious portion of all the formally recognized medicinal systems in Asian nation viz. Ayurveda, Yoga, Unani, Siddha, homoeopathy and treatment, except medical care. Over seventy percent of India's population still use these non-allopathic systems of medication [4] [5].

2. Review of Literature

2.1. *Pelargonium sidoides*: The roots of *P. sidoides* have used for metabolism and G.I. infections by the native people [6] [7][8]. Solely a hundred and twenty years past, it had been represented by the English person Charles Henry Stevens, United Nations agency acclaimed it as a brand new remedy for Tuberculosis [9] [10].

2.2. *Chemical Constitution*: The plant root consist of Coumarins [11] [12]. Dimethoxycoumarin8- sulfate, gallo catechin and epigallocatechin are also present [11][13] [14] [15].

2.3. *Pharmacological Activities*:

2.3.1 *Serum*: A study directed that an 11% ethanol extract of roots of plant has detected a coumarine structure in serum in about an hour but it wasn't quantified [16] [17].

2.4. *Therapeutic Effect*:

2.4.1. *Anti-pyretic*: EPs7630 at the dose of few drops three times a day was unable to considerably cut back the fever [18] [19] [20].

2.4.2. *Headache*: There is a decrease in headaches related to the management of respiratory disorder. One study in acute respiratory illness has didn't notice a major reduction in headache with the quality dose of EPs7630 though this can be not forever [21] [22] [23] [24].

2.4.3. *Immunological Interactions*: A study showed, plant is beneficial in inhibiting exercise-induced immunosuppression by alterations in cytokine and Immunoglobulin profiles [16] [25].

2.4.4. *Neutrophils*: They are able to enhanced cytotoxicity to bacteria in the presence of EPs7630 which is similar to macrophages [26] [27] [28] [29] [30].

3. Patented Review

3.1. *Patent EP 1 429 795*: This patent gives method for producing extracts of *P. sidoides*. The publication date for this patent was 23.6.2004 and Granted on 13.6.2007. The main claim of this patent was method (percolation and maceration) for producing an extract from *P. sidoides*. Water/ethanol may be a main solvent for removal of the active ingredients and different properties of interest [31] [32].

3.2. *Patent EP 1 651 244*: This patent gives the technique to use the extracts from roots of *P. sidoides*. The publication date of this patent was 3.5.2006 and Granted on 29.8.2007. The main claim of this patent was to Use the excerpts from roots of *P. sidoides* for the production of a drug for the treatment of AIDS and linked infections. The diseases related to AIDS embraces a colossal range of viral, bacterial and parasitic infections and also inflammations, which also includes TB, all RTIs and STDs etc. This patent impedes every person in the European Union and related States to use the pelargonium species for treatment of AIDS and devious diseases such as bronchitis, TB, and other infections and inflammation [32].

3.3. *Patent EP 1 684 775*: This patent gives the technique to use the extracts of *P. sidoides*. The publication date for this patent was 2.8.2006 and Granted on 26.3.2008. The main claim of this patent was to use the extracts from roots of *P. sidoides* for the manufacture of drugs which can be used for the treatment of ailments related to social changes, post-pathological asthenia syndrome and chronic pathological conditions induces due to stress [32].

3.4. *Patent EP 1 763 520*: This patent gives the technique to use the trisubstituted benzopyranones present in *P. sidoides*. The publication date for this patent was 30.6.2005 and Granted on 17.12.2008. The main claim of this patent was to use the trisubstituted benzopyranones (extracted from *P. sidoides*), and their biological suitable salts for the treatment of ailments accompanied by oxidative stress and inflammatory responses, neurological diseases (Alzheimer disease or Parkinson's disease), rheumatoid arthritis, tumours, neurodermitis, asthma, psoriasis and bacterial and viral infection such as AIDS, Influenza, hepatitis etc [32].

4. Discussion

Herbal medicines are plant derived medicinal substances which are used world-wide from ancient times for the prophylaxis of diseases. Herbal medicines have got importance in today's world due to its various benefits such as cheaper rates, no synthetic matters, less adverse effects etc. *P. sidoides* is a plant native to South Africa having a healthful uses. The various parts of plants has been used through centuries for the treatment of various diseases such as metabolic disorders, GI infections, RTIs etc. The plant roots, stem and leaves consists of no. of active constituents which can be extracted and can be used for the treatment of various

diseases. The marketed formulation of *P. sidoides* is termed as Umckaloabo which contain an ethanol extract of the roots of genus *P. sidoides* which is used for the treatment of RTIs. The preparation does not seem to interact with other drugs such as warfarin rather it possesses various pharmacological activities. The long term use of this medication seems to be very well tolerated. Higher doses could also be very well tolerated but it hasn't been studied yet. Various patents have been filed against *P. sidoides* in which methods of extracting active constituents from plants have been filed and also various active constituents have been proved to possess medicinal uses for the treatment of AIDS, RTIs, STDs, viral and bacterial infections, neurological diseases such as Alzheimer or Parkinson's disease, arthritis, tumours, neurodermitis, asthma, psoriasis etc.

5. Conclusion and summary

The extract of *P. sidoides* i.e. EPs 7630 is safe and effective for those of medicine age and should be considered another choice for the management of RTI. Various clinical have been widely conducted and shown to be efficacious for the use of *P. sidoides* preparation EPs 7630 that is useful against airway infection, common cold and airway blockage.

6. References

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