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Silene inflata Sm: a Potential Source of Novel Therapeutic Agents

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EDITORIAL

Medicinal plants have been a valuable source of therapeutic agents, and still many of today's drugs are plant-derived natural products or their derivatives (Atanasov *et al.*, 2015; Iqbal and Ashraf, 2019a; Newman and Cragg, 2012). Plants and plant derived products are rich in natural phytochemicals, which make them effective against different microbes and pests (Hussain *et al.*, 2016; Iqbal *et al.*, 2015; Iqbal and Ashraf, 2019b; Kalim *et al.*, 2016; Sattar *et al.*, 2016; Shahzad *et al.*, 2017).

The genus *Silene* is one of the largest genera of the family Caryophyllaceae, (Edalatiyan *et al.*, 2010) often used in folk medicine for the treatment of various diseases. The decoction prepared from root parts of *S. inflata* is used for vomiting and general antidote in cases of poisoning. This plant is also used as an infusion against constipation, to treat wounds, scabies and pruritus and various dermatosis. But it is considered toxic in high doses (Bellakhdar, 1997).

In this issue, Mouffouk et al. report the presence of several types of secondary metabolites including steroids, alkaloids, tannins, polyphenols and saponins in crude extracts. Strong to moderate phenolic contents and antioxidant activities were observed in all the crude extracts. The organic extracts (petroleum ether and ethyl acetate) of *S. inflata* did not display any antibacterial effects on all the bacterial strains, while the methanolic extract revealed an antibacterial effect only against the clinical strain *Staphylococcus albus*. The species *Silene inflata* Sm. could be an important source of new therapeutic agents against pathological damage due to free radicals and microbial infections (Mouffouk *et al.*, 2019).

Nature is a valuable reservoir of novel bioactive entities. Many newly discovered drug molecules serve as excellent medicine for the treatment of chronic illness like cancer, AIDS, tuberculosis etc. (Amiri-Kordestani *et al.*, 2014). Plant extracts could be used as a good source of alternative natural products helpful in preventing or slowing the progression oxidative and infectious diseases (Al-Deen and Al-Jobory, 2018). Many vaccines and therapeutic compounds can be obtained from plants by many ways in green house, in the field and in cell or root cultures (Iqbal and Ashraf, 2018). Pool of proteomic knowledge in a biological and medicinal context can boost the effective use of medicinal plants (Zaynab *et al.*, 2018). Government should allocate more funds for plant based medicinal research and for further commercialization.

CONFLICT OF INTEREST

All the authors have declared that no conflict of interest exists.

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