Antiplatelet activity

Ginseng (Panax ginseng) has antiplatelet activity through thromboxane inhibition and platelet-activating factor [1].

Some authors also advocate cautious use of ginger and vitamin E when planning a surgery, but the exact antiplatelet mechanism is unclear [2].

Sea buckthorn (Elaeagnus rhamnoides (L.) A. Nelson) is a shrub with lanceolate leaves and orange fruits. In traditional Chinese medicine, sea buckthorn organs, especially fruits have been used to treat different diseases, for example cardiovascular disorders. In vitro studies indicate that the phenolic-rich fraction of sea buckthorn fruits demonstrates anti-platelet activity. The aim of the present study was therefore to determine the influence of phenolic and non-polar fractions isolated from the leaves and twigs of sea buckthorn on various parameters of human blood platelets in vitro. Plant material consisted of four different fractions: (1) the phenolic fraction isolated from the leaves, (2) the phenolic fraction isolated from the twigs, (3) the non-polar fraction isolated from leaves and (4) the non-polar fraction from twigs. The chemical composition of the tested fractions was determined using reversed phase UHPLC-HRMS/MS. The fractions from twigs were found to have stronger anti-platelet properties than those from leaves, and all tested fractions were found to be safe for the blood platelets. The tested fractions from the sea buckthorn, especially the non-polar fraction from the twigs, may potentially be a source of compounds with antiplatelet activity [3].

1)
Teng CM, Kuo SC, Ko FN, et al. Antiplatelet actions of panaxynol and ginsenosides isolated from ginseng. Biochim Biophys Acta. 1989; 990:315–320
2)
Stanger MJ, Thompson LA, Young AJ, et al. Anticoagulant activity of select dietary supple- ments. Nutr Rev. 2012; 70:107–117
3)
Skalski B, Stochmal A, Żuchowski J, Grabarczyk Ł, Olas B. Response of blood platelets to phenolic fraction and non-polar fraction from the leaves and twigs of Elaeagnus rhamnoides (L.) A. Nelson in vitro. Biomed Pharmacother. 2020 Jan 25;124:109897. doi: 10.1016/j.biopha.2020.109897. [Epub ahead of print] PubMed PMID: 31991385.