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Screening of phytoconstituents on the basis of their Anti- scar potential using *in-silico* techniques

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ABSTRACT:

The global scar treatment market size was USD 12.3 billion in 2020 and is expected to increase at a compound annual growth rate of 10.1% from 2021 to 2028 .There are many phytochemicals which have been reported in different research studies exhibited anti scar activity .In this *in- silico* research work an attempt was made to do screening of these potent phytochemicals on the basis of their ADME properties and QSAR algorithm based webserver for the prediction of toxicity of the phytoconstituents. In this study ten phytoconstituents were scrutinized which were Asiaticoside ,Madecassoside, Curcumin, Quercetin, Kaempferol ,Eucalyptol, Eugenol ,D-Limonene, Ascorbic acid ,β-carotene and Glycolic acid. These phytoconstituents were screened for Physicochemical properties, Pharmacokinetic properties, drug likeliness properties and Skin permeability prediction Log K_p. The predictive study of skin sensitivity was performed on the basis of Direct peptide reactivity assay, KeratinoSens assay, human Cell Line Activation Test, Local lymph node assay and Human repeat insult patch test. Toxicological study was also conducted to predict the toxicity of selected phytoconstituents. The result of in silico study revealed that Ascorbic acid showed the better result and exhibited promising anti-scar potential as compared to rest of the nine molecules .

Keywords: *in silico,* Prediction ,toxicological ,algorithm,antiscar

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