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## Organic extracts of *Pelargonium graveolens* L'Her and *in silico* docking studies

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*Pelargonium graveolens* is a well-known medicinal plant for essential oil and has therapeutic value in the treatment of diarrhea, dysentery, fever, respiratory tract infections, liver complaints, wounds, gastroenteritis, hemorrhage and bladder disorders. The objective of this study is to evaluate organic extracts of *P. graveolens* and its anti-cancer activity and docking studies. *P. graveolens* dry powder was extracted in different organic solvents through two conventional methods Maceration and Soxhlet to show the efficient method for non-volatile compounds and organic extracts purity characterized based on elution peaks of HPLC and FTIR spectrometric analysis. Among organic extracts, ethyl acetate and methanol showed significant values in Total phenolic content, anti-oxidant, anti-bacterial and anti-cancer activity. HeLa cell lines were cultured under sterile conditions and treated with varied concentrations of organic extracts and they showed the most significant  $IC_{50}$  values in methanol ( $149.4 \pm 0.3$ ) and ethyl acetate ( $146.4 \pm 0.2$ ) of soxhlet extract were as ( $114.9 \pm 0.5$ ) and ( $131.9 \pm 0.3$ ) of maceration extract. GC-MS analysis ethyl acetate extract (Soxhlet) identified 25 non-volatile compounds and  $^1H$ NMR peaks eluted in between  $\delta$  0.67 0 to  $\delta$  8.134 were indicating the presence of aromatic rings structures. Bioinformatics molecular virtual docking study showed the potential non-volatile compounds interactions with HPV E6 protein. The study concludes *P. graveolens* organic extracts shows the anti-cancer activity and does poses active non-volatile compounds.

### Biography

Saraswathi Sompaga is a Ph.D. research scholar in Biotechnology and Genetics from Osmania University. She has completed her M.Sc. in Biotechnology and B.Sc. Gold Medalist from Osmania University. Her research work is mainly focused on Phytochemistry, Biotechnology, Oncology and Bioinformatics. She has published 4 research papers in peer review national and International journals and she has worked as Assistant Professor for graduates and under graduate students.

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