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## Evaluation of *Pterocarpus santalinus* Linn F methanolic extract as a natural melanogenesis inhibitor: *In vitro* study in B16F0 melanoma cell lines

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Melanin, the end product of melanogenesis determines the skin, hair and eye color. Excessive production of melanin causes hyper-pigmentation disorders which results in serious aesthetic problems. *Pterocarpus santalinus* also known as red sanders or raktha chandan is a red dye yielding tree commonly used in treatment of skin disorders and insect bites in Indian traditional medicine. Here, we investigate the anti-melanogenesis effect of methanolic extract of *Pterocarpus santalinus* by cell free tyrosinase assay, followed by cell viability, cellular tyrosinase and melanin content assay in B16F0 melanoma cell lines. The heart wood of *Pterocarpus santalinus* was extracted in methanol and the skin whitening ability was tested. It has been observed that methanolic extract of red sandal wood shows dose dependent inhibitory activity on cell free and cellular tyrosinase activity. No cytotoxic effect was observed in cells treated with the extract up to 200 µg/ml concentrations. Decreased melanin pigmentation was also observed in cells treated with *Pterocarpus santalinus* methanolic extract. Our finding exhibit skin whitening ability of *Pterocarpus santalinus* methanolic extract and serves its use in treatment of several hyper-pigmentation disorders and also as a skin whitening agent in cosmetic industry replacing synthetic toxic skin whitening agents.

### Biography

Hridya Hemachandran has completed her MPharm and presently she is pursuing PhD from SBST, VIT University, India.

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