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Research Abstract

While anticancer properties of *Simarouba glauca* (SG, commonly known as Paradise tree) are well documented in ancient literature, the underlying mechanisms leading to cancer cell death began to emerge very recently. Recently attempts have been made to isolate anticancer agents from the leaves of SG using solvent extraction. In the present study, the preliminary phytochemical analysis and the anticancer activity of the different solvent extracts of SG leaves against various cancer cells were carried out using SRB assay. Further the active phytomolecule, Tricaproin was isolated from the most potent extract and it is structurally characterized. The molecule was tested for (a) inhibition of histone deacetylase activity by *in silco* using Discovery studio, *in vitro* and *ex vivo* methods using HDAC fluorimetric assay kit (b) effect on ROS using H2DCFDA dye (c) activity of caspase-3 using fluorimetric assay kit (d) effect on cell cycle using Flow cytometry. In addition to the above, the effect of the isolated molecule for retarding cancer growth in Swiss albino mice was also determined.

Fellowships: DST-INSPIRE Fellowship (SRF)

Awards & Scholarships:

- Received INSPIRE (Innovation in Scientific Pursuit for Inspired Research) Fellowship
- Published PhD research manuscript in the journal “Frontiers in Pharmacology”, the World’s No.1 open access journal in the field of Pharmacy and Pharmacology
- Received five best paper awards during the PhD period
- First Rank in M.Pharm, Karpagam University, Coimbatore, Tamilnadu
- Third Rank in B.Pharm, Amrita University, Coimbatore, Tamilnadu

Way Forward: In five years, I want to complete post doctoral studies where I can develop increasingly targeted and effective treatments for one of the most pervasive and challenging disease – CANCER. I am driven to be the best at what I do and I want to work somewhere where I’ll have opportunities to develop my skills, take on interesting projects, and work with people I can really learn from.