

### Citation (Brief summary) on the Research Work of the Applicant

The research work of **Ms. Dhanisha Sulekha Suresh** aims in *understanding the mechanism behind the action of phytochemicals in interacting with the biological system during cancer chemotherapy induced immunosuppression and their significance in modulating the immune system and inflammatory mediators*. This is an important area of cancer research and has enormous applications especially in reducing the complications associated with cancer chemotherapy or radiochemotherapy. Till date, Ms. Dhanisha had succeeded in identifying a series of phytochemicals from camachille and had tested the mechanism behind the action using *in silico*, *in vitro* and *in vivo* models. She came out with a concrete evidence stating that camchille and its phytochemicals could significantly reduce the side effects during cancer chemotherapy and could prove experimentally that the complications such as myelosuppression, organ damage and anaemia during cancer chemotherapy can be confidently addressed using this approach (Published data). During this study, she could observe that during camchille intake, there was a marked decrease in tumour cell proliferation, increased tumour cell apoptosis along with tumour size reduction accompanied with marked increase in life span (To be published in Journal- *Food and Chemical Toxicology* - fourth coming special issue). These outcomes give an excellent outline about the way these molecules interact with the tumour cells and their potential in improving the quality of life (QoL) during cancer chemotherapy. She started digging further to understand more about the mechanism behind the action and currently she is investigating on the molecular interactions of these molecules on tumour cells, their role in cancer cell signalling pathways and testing its potential in interfering the cascade of events leading to tumour cell metastasis.

Till date, she had ten publications to her credit in renowned journals such as *Anti-Cancer Agents in Medicinal Chemistry*, *Journal of Food Biochemistry*, *International Journal of Functional Nutrition*, *Cancer Investigation* and *Journal of the American College of Nutrition*. All these publications provide the reader a clear picture about her research planning skills, selection of appropriate tools for research, her analysis skills, troubleshooting strategies and performance of research in an ethical perspective.

  
Dr. Guruvayoorappan. C

Associate Professor, Division of Cancer Research

Regional Cancer Centre, Medical College campus, Thiruvananthapuram 695011, Kerala

E-mail: gururcctvm@gmail.com; guruvayoorappan@rcctvm.gov.in.

Mob: 9894337418