

3<sup>rd</sup> International Conference and Exhibition on

# Pharmacognosy, Phytochemistry & Natural Products

October 26-28, 2015 Hyderabad, India



## Muralidhar Rao Akkaladevi

Maheshwara Institute of Pharmacy, India

### Nano formulations of bioactive natural products for the treatment of cancer

According to the NNI, nanotechnology is the understanding and control of matter at dimensions between approximately 1 and 100 nanometers (nm), where unique phenomena enable novel applications not feasible when working with bulk materials or even with single atoms or molecules. Nanotechnology is ideally suited for drugs with solubility problems. One of the key factors affecting bioavailability of drugs is solubility. Many bioactive natural products have poor water solubility. Nanotechnology has the potential to give new breath of life to those bioactive natural products which were rejected due to their poor solubility. Poorly soluble drugs can also be solubilized by other conventional methods but those methods have various limitations. The nanocrystal technology enables formulations to be developed without the need of toxic surfactants (e.g. Cremophor EL) which may cause enhanced side effects or adverse reactions. Taxol formulation was very difficult because of hydrophobicity. It is made into liquid formula by dissolving it in a solvent called Cremophor. Many people react badly to this solvent and when administered intravenously experienced neurotoxicity. Abraxis developed a form of Paclitaxel using nanoparticles of protein called Albumin. This protein can bind to receptors in blood vessels. Tumor response rate was twice as good for the nano formulated drug. Only 30 minutes are needed for a complete IV dose of the drug instead of three hours. Thus reduced side effects improved quality of life.

### Biography

Muralidhar Rao Akkaladevi is an eminent Teacher in Pharmaceutical Sciences. Currently, he is serving as a Professor and Principal at Maheshwara Institute of Pharmacy, Hyderabad. He has completed his BPharm, MPharm and PhD (Pharmaceutics) from Kakatiya University, Warangal. He has received Senior Research Fellowship (SRF) from AICTE, New Delhi; Best Presentation (Oral) Award in National convention of Association of Pharmacy Professionals, India; "APP Principal of the year Award" at DD University Gujarat; "Bharat Excellence Award at IIC, New Delhi. He is the President of Association of Pharmacy professionals, Telangana State Branch. He is the Fellow Member of Association of Pharmacy Professionals (FAPP), International Science Congress Association (FISCA), International Congress of Pharmacy and Health Sciences (FICPHS), International Congress of Chemistry and Pharmacy (FICCP). He is life Member of Indian Pharmacy Graduate Association (IPGA), Association of Pharmaceutical Teachers of India (APTI), Indian Pharmacological Society (IPS).

[muralidhar1999@gmail.com](mailto:muralidhar1999@gmail.com)

Notes: