



Comparative Study of Phytochemicals and Antioxidant Activity of Selected Plants of Family Apocynaceae

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Abstract : Methanolic extract of *Vinca rosea* leaf demonstrated high total antioxidant capacity as compared to *Thevitia peruviana*. However, total antioxidant capacity of flower of *Thevitia peruviana* is more than that of *Vinca rosea*. *Thevitia peruviana* leaf showed highest absorbance i.e high reducing power as compared to *Vinca rosea* leaf, whereas *Vinca rosea* flower showed high reducing power than *Thevitia peruviana* flower. The antioxidant property is concentration dependent. The result obtained in this study indicated that antioxidant property of *Thevitia peruviana* was nearly equal to *Vinca rosea* which is a well known medicinal plant. Hence this member of the family can also be considered for antioxidant source.

Key Words : Antioxidants, tannins, hydrogen peroxide, phytochemical.

Introduction :

Plants have been a rich source of important therapeutic agents and form the basis of herbal systems of medicine, like ayurveda, resulting in the revival of ancient traditions of medicine. The present study was carried out to investigate the anti-oxidant potential of the leaves and flowers of plants of family Apocynaceae using *in vitro* model systems like Hydrogen peroxide scavenging activity, Total anti oxidant capacity and Reducing Power Assay.

Production of free radicals in the biological system results the imbalance in the level of pro-oxidant and antioxidant known as oxidative stress. In living organisms oxygen in unstable form is the most common free radical. This is called Reactive Oxygen Species (ROS) and is generated during various metabolic activities. These ROS are able to oxidize cellular bio-molecules like nucleic acids, proteins, lipids and carbohydrates (Borah *et al.*, 2011). Antioxidants are radical scavengers which give protection to human body against free radicals by inhibiting the oxidizing chain reactions. When these substances are present at low concentration in body they markedly delay or prevent the oxidation of an oxidizable substrate. These

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