

### Conclusions

The distribution of *Loranthus parasiticus* is determined accounting to their host specificity, and its depend between host and related environmental condition. This plant distributed both tropical and semi-tropical region, normally the plant grow 7<sup>0</sup>C to 52<sup>0</sup>C temperature, 1100 mm to 1500 mm rain fall, 25% to 75% humidity. The plant is distributed by the bird; the seed dropping by birds, seed attached to the host branch by sticky material, then grow and absorb nutrient from the host by the haustorium. So, this up-to-date ecological study claim that the distribution of *Loranthus* can change according to the host peculiarities, vector and environmental condition. This finding can serve as important aspect for the cultivation of these plant families. In ecological and distribution point of view, the study can be explained that the majority of mistletoes come under the family Loranthaceae and Viscaceae. The hemiparasitic taxa *Loranthus parasiticus* grows on old aged trees particularly somewhere at a certain elevation from the surface of trees and distributed in the tropical, semi temperate region of the south West Bengals natural forest. These taxa exhibits a vast range of host frequency. Main host plant is *Swietenia macrophyla*, *Soria robusta* and *Ficus religion*. Flowering periods generally December to February, pollination of these plants usually mediated by birds. the sunbirds are the main vector. Seed of these parasitic taxa are disbursed by birds as they have eaten the fruits. They shows an unorthodox strategy of resource accumulation combining parasitism of their species and they have their own photosynthetic activity. They withdraw resource from host through a special organ called haustorium.

The anatomy of stem as well as leaf shows closed conjoint collateral vascular bundles, prominent pericyclic fiber, xylem prominently distinct, cortex, pith, squarish epidermal cell

prominent. The stomata is paracytic type, stomata is large in number on upper side (4.66 per microscopic field area) of leaf than the lower side (3.33 per microscopic field area) of the leaf. The information gathered from the present study not only contributes to the common knowledge of the species in the family but also give the detail description of morphology, anatomy and micro-morphology which will help in identification of interspecific and intraspecific level. In our observation, the study of dry powder of leaves has no important useful character. So, further work will be carried out to find any positive activity on hypertension. If there is positive result so, also identify and characterize those chemical component which is responsible for the pharmacological action using a bio-activity guided isolation techniques.

This study exhibits that the silver nanoparticles synthesized from leaves of *Loranthus parasiticus* can be used effectively in the treating bacterial disease and diabetes in future.

Phytochemical analysis reveals to presence of potential components or active principles for curing different types of diseases. *Loranthus parasiticus* leaves may be analysed further for qualitative and quantitative extraction for different phytochemicals to explore the possibilities for using as an herbal drugs or crude medicines on scientific ground. The effect of these plants are tested in-vitro for its medicinal point of view, side by side toxicological effects and further purification for drug purposes however needs to be carried out.

The study also proved that, the plant materials have the alpha-amylase inhibitory activity. Though the data and graph shows that the activity of *Loranthus parasiticus* on alpha-amylase. Further study will find out any toxic effect or side effect of this plant extract on

human being. Then use this plant aqueous extract pharmacologically or phytochemically to make medicine and apply on the patient to recover or protect the Diabetis which is the lifelong disorder of human being.

*Macrosolen cochinchinensis* is known to be determined accounting to the specificity of the host, and related environmental condition. It is observed that this plant distributed both tropical and semi-tropical region. The plant is distributed by the Blue-crowned Hanging parrots mainly and other birds; the seed dropping by birds, seed attached to the host branch by sticky material, then grow and absorb water and nutrition from the host by the haustorium. So, these up-to-date ecological studies suggest that the distribution of *Macrosolen cochinchinensis* (Lour.) Tiegh. Change according to the host peculiarities, vector and environmental condition. This finding can serve as important clues to the cultivation of these plant families.

Anatomy of stem and leaf shows conjoint collateral vascular bundles, prominent pericyclic fiber, xylem prominently distinct, cortex, pith, squarish epidermal cell prominent. The stomata is paracytic type, stomata is large in number on upper side (10.42 per microscopic field area) of leaf than the lower side (11.56 per microscopic field area) of the leaf. The present study not only contributes to the common knowledge of the species in the family but also give the detail description of morphology, anatomy and micro-morphology which will help in identification of interspecific and intraspecific level. In our observation, the study of dry powder of leaves has no important useful character. So further work will be carried out to find any positive activity on hypertension. If there is positive result so, also identify and characterize those chemical component which is responsible for the pharmacological action using a bio-activity guided isolation techniques. It is clear that from

the present study, the silver nanoparticles synthesized from leaves of *Macrosolen cochinchinensis* in medium amount can be used effectively in the treating bacterial disease and diabetes management in future.

Phytochemical analysis reveals to presence of potential components or active principles for curing different types of diseases. *Macrosolen cochinchinensis* leaves can be further analysed for qualitative and quantitative extraction of reported phytochemicals to explore the possibilities of using it as an herb medicine on scientific ground. In our study we found these plants may be a good source of minerals and can be utilized in Ayurvedic system to cure disease. Lastly in our study, we proved *Macrosolen cochinchinensis*(Lour.) Tiegh. have the alpha-amylase inhibitory activity by the data and graph. Further study will find out that chemical component of *Macrosolen cochinchinensis* extracts which is responsible to inhibit the alpha-amylase activity. Then use this component as a medicinal aspect for the recovery of the Diabetics, which is the lifelong disorder of human being.

The main objective of this thesis was to study the ecological, micromorphological, antimicrobial and antidiabetic properties and ash value determination of the plant (*Viscum album*) and also study the morphological and anatomical characters.

The distribution of *Viscum album* known to be determined accounting to the host specificity, and its depend between host and related environmental condition. It is observed that this plant distributed both tropical and semi-tropical region, normally the plant grow 7<sup>0</sup>C to 52<sup>0</sup>C temperature, 1100 mm to 1500 mm rain fall, 25% to 75% humidity. The plant is distributed by the sun bird, the seed dropping by birds, seed attached to the host branch by sticky material, then grow and absorb water and nutrition from the host by the

haustorium. So, this up-to-date ecological study suggests that the distribution of *Viscum* can change according to the host peculiarities, vector and environmental condition. This finding can serve as important clues to the cultivation of these plant families.

The anatomy of stem and leaf shows closed conjoint, collateral vascular bundles, prominent pericyclic fiber, xylem prominently distinct, cortex, pith, squarish epidermal cell prominent. The stomata is paracytic type, stomata is large in number on upper side (13.99 per microscopic field area) of the leaf than the lower side (3.33 per microscopic field area) of the leaf. The information obtained from the present study not only contributes to the common knowledge of the species in the family but also give the detail description of morphology, anatomy and micro-morphology which will help in identification of interspecific and intraspecific level. In our observation, the study of dry powder of leaves has no important useful character. So further work will be carried out to find any positive activity on hypertension. If there is positive result so, also identify and characterize those chemical component which is responsible for the pharmacological action using a bio-activity guided isolation techniques.

From the present study, it is clear that the silver nanoparticles synthesized from leaves of *Viscum album* can be used effectively in the treating bacterial disease and diabetes management.

Phytochemical analysis reveals to presence of potential components or active principles for curing different types of diseases. *Viscum album* leaves can be further analysed for qualitative and quantitative extraction of reported phytochemicals to explore the possibilities of using it as an herb medicine on scientific ground.