Nature has been a source of medicinal agents for many centuries and the use of medicinal plants, especially in traditional medicine, is well acknowledged and established. The medicinal value of plants is mainly due to the presence of some chemical substances in the tissues known as secondary metabolites. These chemical substances are mainly Carbon, Hydrogen, Oxygen and Nitrogen containing alkaloids, terpenoids, flavonoids, steroids, phenolics, coumarins etc. which if introduced into the human body produce definite physiological effects.

The revival of interest in the use of medicinal plants by many developing countries and World Health Organization has led to intensified efforts to explore the numerous plants with medicinal importance and as such research has been geared toward finding scientific evidence for the claims of plant by traditional healers. Since the terrestrial plants are by far and large the single largest sources of natural products including the bioactive ones, it is of utmost importance to gather chemical information on such plants. It also become imperative to try to ascertain the biological activity, if there be any, of the crude extracts.

Induced by this state of affairs, I have decided to undertake my work on systematic chemical investigation of one interesting ethnomedicinal plant *Alocasia decipiens* Schott of family Araceae and to screen the plant extracts for certain types of bioactivities. In reviewing pertinent literature, including published books as well as web based resources, it is believed that the present collection of the plant represents the first voucher from Southern Assam and also from Assam as a whole. The plant is claimed to be use in curing different liver diseases in this region. During my field survey I was informed that normally the plant becomes suitable to take only once in a year.

I first came to know about this interesting plant *Alocasia decipiens* Schott from my supervisor while he was talking about his personal and tricky field trip in Angami Naga villages of Nagaland. The plant is used by Angami Nagas (tribes) of Nagaland for curing liver diseases. It is also one of the less studied plants in the entire world. As there is no literature found on this plant so in consultation with my supervisor I have
decided to work on its phytochemical analysis and biological screening, especially its hepatoprotection.

As a result of our studies, embodied in this thesis, we have been able to analyze the chemical groups present in the plant and ascertain the antibacterial, antioxidant and hepatoprotective potentiality of the extracts.

This thesis is organized into five chapters’ viz. introduction, review of literature, pharmacognostical investigation & phytochemical screening, bioactivity evaluation and discussion & conclusion.

To conclude, the selection of the plant was right, the experiments were carried out accurately, the handling of data was correct and the overall information that I retrieved through my studies justified the undertaking of the present research work.