3.1. **Aim:**

Production of colchicine and other metabolites from Endophytic fungi of *Gloriosa superba*

3.2. **Objective:**

It is evident from the literature that due to medicinal importance of colchicine, many plant sources of this therapeutically active molecule like *Iphegenia indica, Gloriosa superba* are on the verge of extinction. So objective of carrying out this study was:

- Isolation of endophytic biodiversity of *Gloriosa superba* from surface sterilized parts of the plant and to do extensive screening of the isolates to find out a microbial strain which could be capable of producing Colchicine or any other related bioactive molecule and can prove to be an alternative source of this bioactive molecule, other than these rapidly dwindling plant species.
- Identification of the molecule extracted from selected isolates with the help of various sophisticated spectroscopic techniques like IR, UV, NMR, and MASS was an important part of the plan.
- It was also a part of work that if any such strain, which is capable of producing any bioactive molecule, is isolated from the internal tissues of different parts of *Gloriosa superba* then the production of that biomolecules will be observed with respect to the fermentation time of that particular microbial strain.
- Molecular/morphological identification of biodiversity, been isolated in this study was also an objective of the study.
- Quantification of the biomolecules with help of HPLC/HPTLC with respect to the dry microbial mass was also an agenda of this study.