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## Phylogenetic exploration of *Gloriosa superba* and *Colchicum autumnale* Rhizome development genes

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Medicinal rhizomatous crops such as *Gloriosa superba* and *Colchicum autumnale*, which are producers of pharmaceutical colchicine. Comparative transcriptome analysis of *G. superba* and *C. autumnale* provides a resource to identify key specific genes involved in rhizome development and improve our knowledge to advance colchicine biomanufacturing. Blast2GO presented the identification of rhizome developmental genes belonging to several classes including *GIGANTEA*, *CONSTANS*, *Phytochrome B*, *Sucrose Synthase*, *Flowering locus T* and *REVOLUTA* candidate genes. These crucial classes of rhizome developmental genes could lead to enhanced colchicine and biorhizome biomass in biomanufacturing.

### Biography

Ganapathy Sivakumar's research is primarily focused on biomanufacturing and biotech implications of biopharmaceuticals. He has extensively studied the plant-based small molecules pathway biochemistry, synthetic biotechnology and metabolic & bioprocess engineering. He is internationally recognized in the field of biopharmaceuticals and a pioneer in biomanufacturing of biorhizome-based colchicine. He has over 50 publications. He is also on the editorial board of several journals. He serves as an expert of grant proposals as well as numerous scientific journals. His laboratory focuses on metabolic and bioprocess engineering of colchicine pathway and developing potential anticancer medicine.

### Notes: