

# ANNUAL BIOTECHNOLOGY CONGRESS

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## Ganapathy Sivakumar

University of Houston, USA

**Biomanufacturing of biorhizome**

**G**loriosa superba seed is the most important traditional plant-based colchicine source for pharmaceutical industry. Colchicine prevents microtubules assembly and thereby suppresses cancer cell division by inhibiting mitosis as well as successfully used in gout medicine. My lab established the biorhizome platform to biomanufacture natural isomer colchicine, which is a new biotech concept in industrial biotechnology. However, limited emphasis has been placed on identifying colchicine biosynthetic pathway genes in *G. superba* biorhizome. In addition, understanding the dynamics of biorhizome developmental events is essential to improve the colchicine biomanufacturing. The presentation will cover current knowledge of colchicine

biosynthetic pathway elucidation and biorhizome-based colchicine biomanufacturing.

### Speaker Biography

Ganapathy Sivakumar has extensively studied the plant-based small molecules pathway biochemistry, synthetic biotechnology and metabolic and bioprocess engineering. His research is primarily focused on Biomanufacturing and Biotech implications of Biopharmaceuticals. He is internationally recognized in the field of Biopharmaceuticals and a pioneer in Biomanufacturing of biorhizome-based colchicine. He has over 45 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.

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