



Ganapathy Sivakumar, PhD
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Academic interests: Bioenergy production from algae and biofuel crops; Bioprocess engineering – Plant-based small molecules and therapeutic protein production through industrial-scale bioreactors; Plant metabolic engineering; Natural products molecular chemistry; Drug discovery and Biopharmaceuticals.

Research Focus & Techniques of Expertise: Sivakumar's lab focuses on the Pilot-scale algal biomass production using photobioreactor, Algal oil extraction using alginator, Transesterification; Plant root-based production of therapeutic small molecules using air-lift and mist bioreactor systems; Metabolic profiling of bioactive molecules using HPLC-MS and Resin based downstream-processing technologies for small molecules separation.

Current Research Projects:

- * Biobased products and biodiesel production from algae
- * Botanical insulin production from plant root culture
- * Bioethanol production from *Miscanthus x giganteus* – a global future energy crop

Grants:

- Grant (P3-207): Establishment of Root Culture for “Botanical Insulin” Production
PI: Ganapathy Sivakumar; Co-PI's: Jackson O Lay, Fabricio Medina-Bolivar
- Grant ABI (262147): Plant-based Production of Potential Anti-diabetic Corosolic acid
PI: Ganapathy Sivakumar
- Grant DOE (DE-FG36-08GO88025): Proposal to Develop Algal Biofuels
PI: Pamela J Weathers; Co-PI: Ganapathy Sivakumar