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Industry consultancy services

Area of Expertise:

1. Process development for microalgal biomass development for bioproducts like, Beta carotene, zeaxanthin and astaxanthin using low cost substrates.
2. Extraction and characterization of secondary metabolites like anti-diabetic compounds, UV protectants, anti-obesity drugs from Micro and Macroalgae.
3. Process development for enhanced enzyme production and characterization.
4. Technology developed for hyper lipid accumulation and biodiesel production from algae.
5. Strategies for enhanced biopolymer production from algae, bacteria and agro wastes and its applications in drug delivery and bioremediation of wastes.
6. Synthesis of biocatalysts from wastes for transesterification.

Contribution in Process/Product development and Technology Transfer:

- Developed low cost technologies for hyper lipid accumulation for biodiesel production in algae
- Developed technology for beta carotene accumulation in microalgae using different nutrient sources.
- Identified a suitable strategy for targeted drug delivery using quantum dots and nanoparticles from wastes.
- Employed a new strategy for purification of phycocyanin from cyanobacteria.
- Developed methods for algal biomass development using organic supplements.
- Technology transferred for hyper beta carotene accumulation in green microalgae.

Consultancy services can be given for:

- Products from Algae (Microalgae, *Spirulina* sp, *Dunaliella* sp, *Sargassum* sp, *Turbunaria* sp, *Padina* sp etc).
- High protein, lipid and pigment accumulation in cyanobacteria and green algae. Biomass development using low cost technologies.

- Extraction of high value products (astaxanthin) from micro and macroalgae. Production of Algal biofertilizer, phycosorbents, biopolymers etc.
- Utilizing algae to treat industrial effluents containing heavy metals an alternative to the existing practice of using other biosorbents and physic-chemical methods.
- Phycoremediation technology for industrial waste water treatments.
- Separation of polyphenols from algae.

