



Colorado School of Mines Office for Technology Transfer

Increased Lipid Accumulation and Carbohydrate Synthesis in Strains of Microalgae

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Description: In this invention we report methods by which various strains of microalgae are manipulated. From these manipulations, the microalgae can be made to: 1) overproduce two principal building blocks for biofuels feedstocks, starch and TAG; 2) overaccumulate lipids or 3) accumulate significantly higher levels of both lipids and starch, while the cells are dividing. The methods do lead to attenuated rates of photosynthesis and acetate uptake, the overall effect is a dramatic carbon production accumulation.

Potential Areas of Application

- Biofuels production
- Increased use of algae as food stocks

Main Advantages of this Invention

- Ability to increase starch production in specific algae strain by tenfold
- Significant increases in other carbon phenotypes
- Manipulations are simple to perform

Intellectual Property Status: Provisional Patent Application 61/467,919

Opportunity: We are seeking an exclusive or non-exclusive licensee for marketing, manufacturing, and sale of this technology.

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