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# BIOFUELS AND BIOENERGY

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## Biofuels production from microalgae extracts (green diesel and biokerosene)

Luis F Barahona  
CICY, Mexico

The production of alternative bio jet fuels is mainly driven by environmental concerns and dependence on fossil fuels. Renewable feed stocks have been studied to provide biofuels with high energy densities, good cold flow properties and stability. Non edible oils and microalgae oils have been used to synthesize bio jet fuel and proved by several airlines. Oil palm, Jatropha, Camelina and microalgae are the most common feed stocks used until now. Due to their productivity, microalgae have good potential to be used as feedstock for biofuels production. Several studies have been carried out to assess their potential to produce three main chemical fractions: Lipids, carbohydrates and proteins that can be converted into biodiesel, bioethanol, biohydrogen and methane. In our group, we are studying the adaptation of the freshwater microalga *Scenedesmus obliquus* to synthetic wastewater and molasses as carbon source. The effect of culture time on lipid profiles and the synthesis of biofuels from the microalgal extracts will be discussed.



### Biography

Luis F Barahona has been working on biofuels production from agro-industrial residues. The processes are developed at laboratory scale but focused on the use of regional biomass and easy scale-up. He has applied biotechnological and chemical expertise to better understand the effects of process conditions on biofuels yields as well as sustainable processes.

barahona@cicy.mx

### Notes: