6$^{th}$ World Congress on

# BIOFUELS AND BIOENERGY

September 05-06, 2017 | London, UK

## Biofuel precursors from almend shell under microwave radiation

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The progressive decrease of fossil fuels and the increase of $CO_2$ emissions suppose a serious problem for the environment. Moreover, it has been object of study by many research groups for the last years. One of the main renewable source energy in the world is biomass. The agro-industrial wastes also suppose an important source of raw material at the time of reduce these emissions. Among these wastes previously mentioned it can be found melon rind1, beer bagasse or almond shell2. Almond shell is mainly made of cellulose, hemicellulose and lignin. Some simple sugars have been also identified, such as glucose, xylose and fructose. The dehydration of these sugars generates some compounds which have been evaluated as precursors of biofuels due to their calorific capacity are lower than the oils currently used. Among these precursors can be remarked 5-hydroxymehylfurfural (HMF), levulinic acid (LA) and 2,5-dymethilfuran (DMF).3 Microwave radiation is a suitable technique that permits us to carry out the hydrolysis and dehydration of cellulose to obtain the desired products.4 In addition, Nuclear Magnetic Resonance (NMR) allows us to identify and quantify all reactions products.
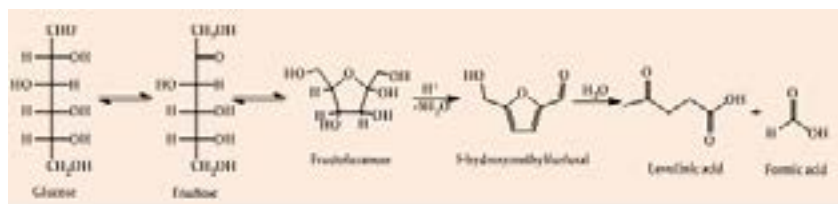


### Biography

M Salgado graduated in Chemistry in 2015 from University of Castilla-la Mancha (UCLM). Later, he completed her Master´s degree in organic chemistry at the Complutense University of Madrid (UCM). He has worked in some groups during his five years as a student. His research career is brief, but he has obtained a publication and participation in several scientific congresses. Actually, he is a PhD at the University of Castilla-La Mancha, in the Organic Chemistry area with the Doctors Andres Moreno Moreno and Maria del Prado Sanchez Verdu.

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## Notes:

J Bioremediat Biodegrad, an open access journal
ISSN: 2155-6199

Biofuels Congress 2017
September 05-06, 2017

Volume 8, Issue 5 (Suppl)

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