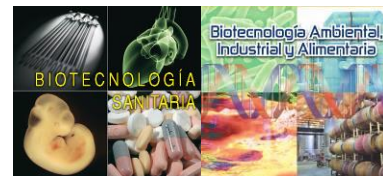

Poster

Synthesis and biomedical applications of supramolecular hydrogels derived from carbohydrates



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ABSTRACT

Motivation: The low cytotoxicity, physical-chemical properties, structure made by nanofibers scaffolding and their ability to constitute drug nanocontainers, makes supramolecular hydrogels essential biomaterials to regenerative medicine, tissue engineering and new drugs development. Those structures thanks to the ability to emulate the conditions carried out in vivo and to constitute drugs diffusion models allow migration, growth and cell differentiation. [1],[2]

By It, our research was directed to synthesis of light-curing neoglycolipids derivatives of azobenzene with capacity to form hydrogels or micelles. The E/Z isomerism of the double link N=N of the Azobenzene glycosides allows the united carbohydrates distribution to change, which will determine the effect of isomerism change in the capacity to form hydrogels or micelles by these structures.[3]

Methods and Results: During this project a Azobenzene derived glycolipid was synthesized through different synthetic routes given the high degradability of the compounds and low yield reactions. The monomers structure used, as well as the glycolipid formed, has been determined by ^1H NMR and high resolution mass spectroscopy.

Conclusions: To date we are trying to improve the synthesis methods and adjust the reaction condition to get better performance and stability of the compounds.

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