

4th Edition of International Conference on **Polymer Science and Technology**

June 04-05, 2018 London, UK

Polym Sci 2018, Volume 4 DOI: 10.4172/2471-9935-C2-012

NEW DRUG-LOADED PHOSPHORUS DENDRIMERS: SYNTHESIS, CHARACTERIZATION AND BIOLOGICAL EVALUATION

Nabil El Brahmi

Euromed University of Fes, Morocco

Dendrimers are monodisperse nanosized polymeric molecules composed of a large number of perfectly branched monomers. The versatile chemical composition of dendrimers strongly offers a variety of applications in different areas such as for instance: chemistry, catalysis, and medicine. Currently, the potential of using dendrimers as nano-carriers for drug delivery is revolutionizing medicine by improving the efficiency and reducing the toxicity of various treatments. Dendrimers can form either covalent or non-covalent (encapsulation) bonds with bioactive molecules. In the case of covalent bond, drug can be directly attached to dendrimer or via a linker – cleavable or not - and the resulting drug-loaded dendrimer can act as a nano-vehicle for drug transport and controlled release. We will present the synthesis and characterization of original functionalized phosphorus dendrimers (generations G1 to G3) containing various functional groups on their peripheries such as arene-copper (II) and ethacrynic acid moieties. Also, we will report the studies of the very interesting cytotoxicity activities against different solid and liquid cancer cell lines of these new dendrimers.

n.elbrahmi@ueuromed.org