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1st Generation dendrimeric structures and fatty acid conjugates of arylmethyl Meldrum`s acids

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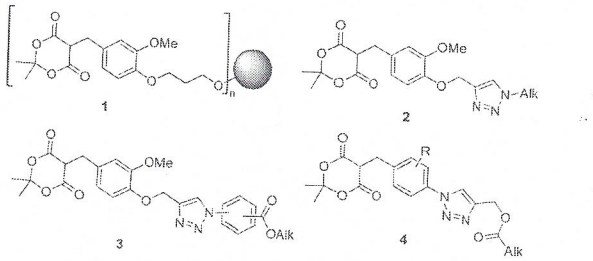
Antioxidants are found to be useful for treatment of various oxidative stress caused diseases, especially, neurodegenerative illness;[1] unfortunately usage of antioxidants often is rather limited due to their low ability to cross blood-brain barrier.[2] Previously, we have found arylmethyl Meldrum`s acids as novel outstanding antioxidants with great antioxidant activity both in hydrophilic and lipophilic media.[3] In order to overcome insufficient lipophilicity, which is crucial for crossing blood-brain barrier, some authors have suggested to incorporate the active compound into nano-forms, including dendrimers,[4] as well as to construct drug-fatty acid conjugates.[5] The structure of arylmethyl Meldrum`s acids can be easily modified leading to significant changes in solubility without remarkable loss of antioxidant and antiradical activity. Inspired by above mentioned examples we have designed the new 1st generation dendrimeric structures **1** based on both aliphatic and aromatic core. Besides that few conjugates **2-4** containing 1,2,3-triazole linker were constructed. It is well known that arylmethyl Meldrum`s acids can form zwitterionic structures[6] with increased antiradical activity in comparison to analogous compounds which are not able to form internal salts.[3] Furthermore, the impact of triazole moiety on antiradical activity will be discussed. The antiradical activity of all synthesized compounds **1-4** was evaluated by DPPH and GO tests.



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