

Rama Krishna, T.; Belwal, M.; Tatu, U. S.; Jayaraman, N., 2005, "Synthesis of water soluble and non-toxic poly(ether imine) dendrimers", *Tetrahedron*, 61, 4281 – 4288.

The synthesis and evaluation of the cytotoxic properties of new poly(ether imine) dendrimers, constituted primarily by tris-propanolamine, are reported. Dendrimers reported herein have tris-propanolamine as the monomer, in which the amine formed as the core and the branching component, whereas the alcohol functionality is used as the linker component, upon its conversion to an ether. The peripheral functionalities could be either alcohols, amines, carboxylic acids, esters or nitriles. With a broad choice of functionalities possible, these dendrimers have the necessary features to be incorporated in a number of studies. Further, the carboxylic acid terminated dendrimers were evaluated for their toxicity profiles and we observe that these new dendrimers, consisting of polyether and polyimine constituents, are almost non-toxic. From the non-toxic properties, these dendrimers may also be considered as biologically relevant materials or 'biodendrimers'. In this instance, there are only very few dendrimers that are studied so far in biological studies. A dendrimer of the type as described herein, having similar features as that of eminent poly(amido amine) dendrimers, may also receive a general acceptance in biological studies.