



národní
úložiště
šedé
literatury

Cationic Carbosilane Dendrimers for Bioapplications.

Müllerová, Monika
2016

Dostupný z <http://www.nusl.cz/ntk/nusl-261726>

Dílo je chráněno podle autorského zákona č. 121/2000 Sb.

Tento dokument byl stažen z Národního úložiště šedé literatury (NUŠL).

Datum stažení: 01.10.2024

Další dokumenty můžete najít prostřednictvím vyhledávacího rozhraní [nusl.cz](http://www.nusl.cz) .

Cationic Carbosilane Dendrimers for Bioapplications

Monika Müllerová¹, Lucie Červenková Šťastná¹, Jan Malý², Dominika Wróbel²,
Tomáš Strašák¹

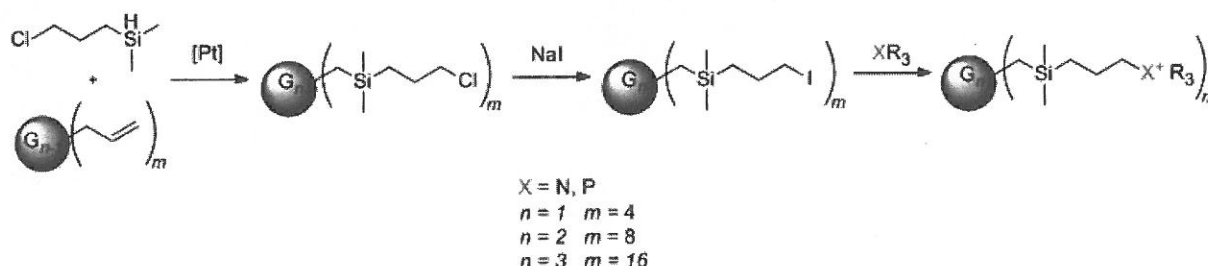
¹*Institute of Chemical Process Fundamentals, Academy of Sciences of the Czech Republic, Rozvojová 135, 165 02 Prague 6, Czech Republic.*

²*Department of Biology, Faculty of Science, University of J.E. Purkinje, Usti N/L, Czech Republic*

E-mail: mullerovam@icpf.cas.cz

Carbosilane dendrimers represent three-dimensional branched molecules with defined structure and accurate molar weight. With their unique properties, carbosilane dendrimers are under intensive investigation for many biomedical applications, mainly for drug targeting and gene therapies. Carbosilane dendrimers with cationic groups at their periphery are able to interact with biomolecules and cellular structures. Scientific research in the area of gene therapies depends on the development of specific, non-toxic and secure vectors for therapeutic delivery of nucleic acids. For that purpose, mainly carbosilane dendrimers with ammonium groups were investigated¹. Carbosilane dendrimers bearing other cationic groups attracted little attention so far.

Short entry will be focused on the presentation of synthesis and chemical properties of cationic carbosilane dendrimers (1.-3. generation) with nitrogen- and phosphorus- onium groups at periphery. In addition, biochemical properties including cytotoxicity and the ability to interact with biomolecules (DNA, RNA) and cell structures studied in cooperation with biology department of the University of J. E. Purkyně in Ústí nad Labem will be briefly presented².



This work was supported by Czech Science Foundation (GA CR) (GA15-05903S).

1 Arnáiz, E.; Doucede, L. I.; García-Gallego, S.; Urbiola, K.; Gómez, R.; Tros de Ilarduya, C.; de la Mata, F. J. *Mol. Pharmaceutics* **2011**, *9*, 433–447.

2 Article under preparation.