SOLUBILITY STUDY OF THE INTERACTION BETWEEN PAMAM G4 DENDRIMER AND FLUDARABINE IN AQUEOUS SOLUTION

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Poly(amidoamine) dendrimers (PAMAM) are polymeric macromolecules that can find their use as carriers of drugs both for animals as well as humans. Fludarabine is a potent oncological drug, whose usage is limited because of its relatively high toxicity. The surface groups in PAMAM dendrimers belonging to the forth (G4) generation allow ligand molecules to bind with terminal dendrimer groups and to penetrate the dendrimer interior. That is why the macromolecules of PAMAM dendrimers might be used reduce toxicity of highly toxic drugs.

The aim of our study was to evaluate the number of fludarabine molecules combined by PAMAM G4 macromolecule in aqueous solution. Using the results of the drug solubility in dendrimer solutions (UV spectrometry), the maximal number of drug molecules in the dendrimer-drug complex was evaluated.

Project was funded by the National Science Centre of Poland according to the grant decision OPUS DEC-2012/07/B/ST4/00509.