

**A standpoint of supervisor regarding PhD Theses
“Study od adamantane-based supramolecular cross-linkage agents
for cyclodextrin-modified biopolymers”
by Jelica Kovačević**

Jelica Kovačević participated on research in my group for four years, since 2015. As title of her Theses indicates, her work was aimed at supramolecular cross-linkage of modified biopolymers. The most important part of her work was focused on preparation of biopolymers, namely hyaluronan and chitosan, modified with β -CD units and supramolecular studies of cross-linkage via multitopic adamantane-based guests. Simultaneously, Jelica worked on adamantane-derived model guests and ditopic guests based on bicyclo[2.2.2]octane. Two from these three projects were finished with publication in impacted scientific journals.

The structure of submitted document reflects aims mentioned above. Theoretical part provides information regarding structure and properties of adamantane, cyclodextrins, chitosan, and hyaluronan. Several chapters are dedicated to applications of abovementioned compounds/materials. In my opinion, a deeper insight into modification methods for hyaluronan and cyclodextrins, which should be supported by number of particular examples from literature, would be helpful to allow the readers better understanding the novelty and importance of the presented work. Discussion part is logically divided into three parts following the three projects mentioned above.

Jelica did not succeed in one area, namely in finalisation of bicyclo[2.2.2]octane project where one guest (unfortunately, the most important one) out of three was not prepared in sufficient purity. I am convinced that more courage in conducting experiments, greater confidence in her own analytical results, and more accurate reading the available evidences and indices will help her in future scientific work.

During the four years in my lab, Jelica became a valuable member of the team. She significantly improved and developed her theoretical knowledge in organic synthesis and supramolecular chemistry and her practical skills including organic synthesis and product analysis and characterisation. It is worth noting that the supramolecular cross-linking and polymer modification were new topics in our research group. Therefore, Jelica had to adopt and develop appropriate methodologies especially for polymers purification and characterisation. Finally, I would like to state that the Theses were negatively checked for plagiarism. Indeed, it is no surprise since the majority of the work underwent the peer review process prior publication in scientific journals. I can conclude that the work is original, with significant portion of novelty, meets all formal requirements and I recommend it for the defence.

In Loučka, 16-04-2020

