



## VI. Symposium of Young Researchers on Pharmaceutical Technology, Biotechnology and Regulatory Science

January 24-26 2024 - Szeged, Hungary

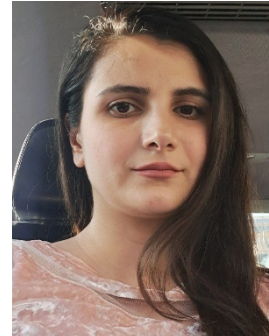
**FP-12**

DOI: [10.14232/syrptbrs.2024.61](https://doi.org/10.14232/syrptbrs.2024.61)

### **Development of functionalized protein-based nanoparticles for improved drug delivery of antineurodegenerative drugs**

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The blood–brain barrier (BBB) restricts the transport of several therapeutically utilized central nervous system (CNS)-active drugs. Intranasal drug delivery means a suitable choice to bypass BBB and effectively transport therapeutic drugs to CNS target. The application of nanocarriers is crucial, since they are able to protect the drug from enzymatic degradation and can improve absorption and transport of drugs across the BBB directly into the brain. Protein based nanocarriers (e.g. albumin or hyaluronic acid) are an attractive alternative to synthetic polymers, which commonly used in nanoparticle formulation because of their safety, biocompatibility and biodegradability.

Because of the defined primary structure of proteins, they offer various possibilities for surface modification due to the presence of functional groups (i.e. carboxylic and amino groups) on the surface of the nanoparticles.

During my research work, we aim to develop functionalized protein-based nanoparticles by post-synthetic functionalization with appropriate ligands, in order to improve the BBB permeability of central nervous system-related drugs. Initially, desolvation method is a simple and easily reproducible preparation method, which can be used to prepare protein-based nanocarriers with high drug entrapment efficacy.

*Acknowledgment:* Project No. TKP2021-EGA-32 was implemented with the support provided by the Ministry of Innovation and Technology of Hungary from the National Research, Development, and Innovation Fund, financed under the TKP2021-EGA funding scheme