

論文 / 著書情報
Article / Book Information

題目(和文)	ポリサルコシン修飾リポソームの調製と細胞内送達および薬物動態挙動
Title(English)	Preparation of Polysarcosine-Coated Liposomes and Their Intracellular Delivery and Pharmacokinetic Behavior
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学位種別(和文)	博士論文
Category(English)	Doctoral Thesis
種別(和文)	要約
Type(English)	Outline

Outline of the thesis

Thesis abstract

List of abbreviations

Chapter 1 General introduction

- Development of nanoparticle for drug delivery system
- Evolution of liposomes
 - Structural chemistry of liposomal formation
 - Recent strategies for liposome surface modification
 - Liposomal nanocarriers delivery applications
- Liposomes coated Polyethylene glycol (PEG) polymer
 - PEG-liposomes
 - Accelerated blood clearance (ABC) phenomenon
- Polysarcosine-based nanocarriers
 - Polysarcosine (PSar)
 - Applications of PSar copolymers as nanocarriers
- Scope of the thesis
 - Research aims
 - Composition and objectives of this thesis
- References

Chapter 2 Effect of polysarcosine chain on cell uptake of polysarcosine-coated liposomes

- Introduction
- Experimental
 - Materials
 - Synthesis of PSar23-PE, PSar45-PE, PSar68-PE
 - Preparation of PSar-lipos
 - Transmission electron microscopy (TEM)
 - Dynamic light scattering (DLS) and zeta-potential analysis
 - Membrane fluidity evaluation
 - Cell experiments
 - Statistical analysis
- Results and Discussion
 - Synthesis of PSar-PE with click reaction

- Characterization of PSar-lipos
- Cell experiment results
- Conclusion
- References

CHAPTER 3 Polysarcosine-coated liposomes attenuating immune response induction and prolonging blood circulation

- Introduction
- Experimental
 - Materials
 - Animals
 - Preparation of PSar-lipos
 - Characterization of PSar-lipos
 - Nanoparticle tracking analysis (NTA)
 - Antibody expression level of PSar-lipos
 - Blood circulation and biodistribution of PSar-lipos
 - Statistical analysis
- Results and Discussion
 - Characterization of PSar-lipos
 - Anti-PSar antibody expression
 - Pharmacokinetics of PSar-lipos
 - Repeatability of PSar-lipos biodistribution\
- Conclusion
- References

Chapter 4 Conclusion remarks and future perspectives

- Conclusion
- Future Perspective
 - Effect of PSar surface conformation on the protein adsorption
 - Investigation of the relationship between the N-terminal of PSar chain and complement activation
- Reference

List of Publications

Acknowledgements