



A comparison of different strategies for antimicrobial peptides incorporation onto/into lipid nanocapsules

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Titre	A comparison of different strategies for antimicrobial peptides incorporation onto/into lipid nanocapsules
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Auteur	Matougui, Nada [1], Groo, Anne-Claire [2], Umerska, Anita-Monika [3], Cassisa, Viviane [4], Saulnier, Patrick [5]
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Mots-clés	Amp [6], antimicrobial peptides [7], antimicrobialactivity [8], Formulation [9], nanomedicine [10], protease [11], Stability [12]
Résumé en anglais	<p>Aim: Over the last decade, antimicrobial peptides (AMPs) have emerged as a promising alternative for the treatment of various infections. The aim of this work is to explore the potential of lipid nanocapsules for the delivery of AMPs. Three approaches were compared in terms of encapsulation efficiency, peptide activity and protection against proteases: peptide encapsulation, surface adsorption or covalent attachment of three selected AMPs. Results: A potentiation of the antimicrobial activity and a partial protection of the peptides after adsorption were demonstrated compared with native peptides. Conversely, encapsulation allowed better peptide stability, correlated with higher encapsulation efficiencies and a preservation of the activity. Finally, the covalent attachment strategy turned out to be less conclusive due to peptide inactivation. Conclusion: In brief, a lipid nanocapsule-based platform appears suitable to deliver AMPs.</p>
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Liens

[1] <http://okina.univ-angers.fr/nada.matougui/publications>

- [2] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=24559>
- [3] <http://okina.univ-angers.fr/anita.umerska/publications>
- [4] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=17323>
- [5] <http://okina.univ-angers.fr/patrick.saulnier/publications>
- [6] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=23232>
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- [12] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=249>
- [13] <http://okina.univ-angers.fr/publications/ua19970>
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