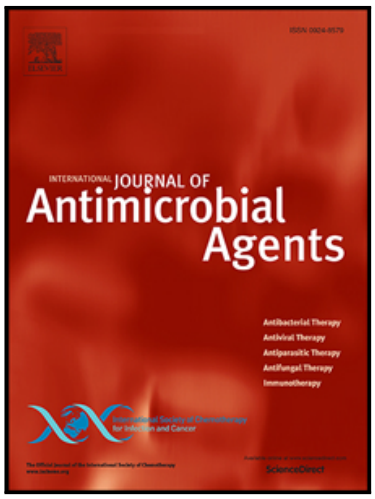

A novel tool against multiresistant bacterial pathogens – lipopeptide modification of the natural antimicrobial peptide ranalexin for enhanced antimicrobial activity and improved pharmacokinetics

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Highlights

- The antimicrobial peptide ranalexin showed strong antimicrobial activity against Gram-positive bacteria and *Acinetobacter* species.
- Ranalexin is excreted via the kidneys within one hour in WISTAR rats.
- Lipopeptide derivatives of ranalexin displayed enhanced antimicrobial activity, especially against Gram-negative bacteria.
- The investigated lipopeptide derivative accumulated in the liver of WISTAR rats.
- Time-kill studies showed a fast concentration-dependent killing within one hour.
- Cytotoxicity of the lipopeptides depends on the chain length of the fatty acid.