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A Therapeutic Polyelectrolyte–Vitamin C Nanoparticulate System in a Polyvinyl Alcohol–Alginate Hydrogel: An Approach to Treat Skin and Soft Tissue Infection Caused by *Staphylococcus aureus*

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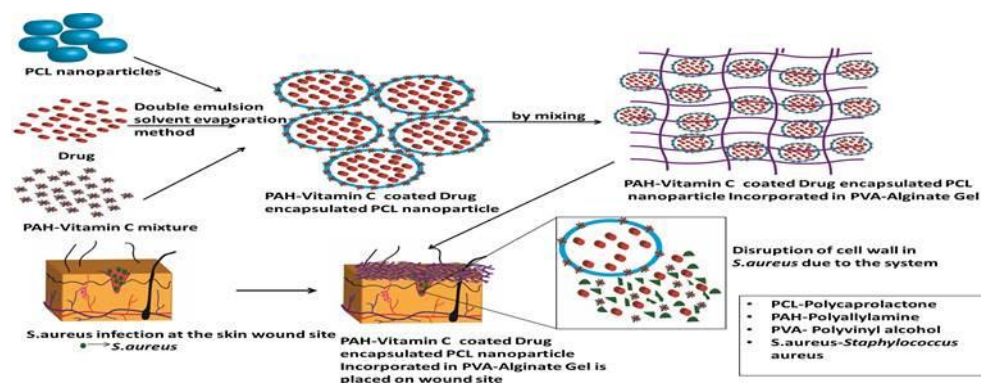
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Graphical abstract



Highlights

- Pvc coating in the formulation is a potential biocide for *S. aureus* SSTIs.
- D-PCL-PVc-PVA(Alg) is an ideal gel for skin application and non-toxic to cells.
- SEM imaging shows complete disruption of *S. aureus* cell wall.

ABSTRACT

Staphylococcus aureus infections affecting the skin and soft tissues are of significant health concern and an unmet need to be addressed. The lack of drug penetration into the infectious site is the main clinical challenge. Once the pathogen invades the wounded skin, it attenuates

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