Mater Sci Nanotechnol 2019, Volume 3

# MECHANICALLY RESISTANT, BIODEGRADABLE PVA/CA DRESSINGS FUNCTIONALIZED WITH LL37 PEPTIDE REDUCE MICROBIAL BURDEN

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Typically, acute wound healing is a well-organized process that evolves in a predictable amount of time. Chronic wounds (CW) result from gradual tissue degradation, and are characterized by defective cell matrix, high bacteria counts, prolonged inflammation and moisture imbalance. Antimicrobial dressings, that combine dressing and antibiotics, have been suggested as potential strategies to treat CW. However, the rising of antibiotic-resistant pathogens has turned these systems obsolete, revealing antimicrobial-peptides (AMPs), which display a broad spectrum of activity against pathogens and act rapidly at multiple sites within microbial cells, as viable alternatives. Methodology: In this work, poly(vinyl alcohol) (PVA) and cellulose-acetate (CA) were prepared via casting/phase-inversion method in the form of films. Different PVA/CA ratios were tested. Their mechanical, thermal and biodegradation profiles were followed. The films' capacity to absorb exudates was also determined. Films were functionalized with LL37 peptide. This AMP is endowed with immunoregulatory abilities, with great potential for wound healing, and important antimicrobial features.