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Pharmacological Insights of Wounds and Updated Review

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Abstract: In chronic wounds, the carefully controlled, multi-phase biological process of wound healing—which includes hemostasis, inflammation, proliferation, and remodeling—becomes dysregulated. Pharmacological and bioengineering developments have advanced quickly in recent years. These include biologics and tailored growth factor therapies, antimicrobial/antibiofilm dressings, cell-derived therapies (PRP, MSCs, exosomes), and smart/nanotherapeutic delivery systems. In addition to highlighting prospective translational pathways, present limitations (safety, delivery, cost, and antimicrobial stewardship), and research objectives, this review synthesizes mechanistic knowledge and clinical evidence from 2020 to 2025.

Keywords: Wound, Burn Wound, Treatment, Causes, Management, Incision, Safety







