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Triple Layer Biodegradable Patch for Seroma Prevention and Post Surgery Healing

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The Research paper presents the development of a triple-layer biodegradable patch designed to enhance wound healing in post-surgical scars and seroma prevention. The patch is structured into three functional layers: an outer antibacterial shield that prevents microbial entry and protects against external contaminants, a middle absorption layer that maintains optimal moisture, accelerates tissue repair, and absorbs excess exudates, and an inner healing layer that permits healing of the tissues and also helps in regeneration of the tissue ensuring skin comfort. By combining infection prevention, absorption and healing tissue regeneration within a single platform, the patch supports faster recovery and minimizes complications during the healing process. With its biodegradable, patient-friendly, and cost-effective design, this system holds strong potential for clinical wound care and post-surgical applications, particularly in settings where affordable and effective solutions are critical.

Keywords: Antibacterial shield, Biodegradable patch, Oxygen permeability, Post-surgical care, Wound healing

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