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(57) Abstract :

This invention discloses bioactive nanoparticles for controlled drug release in endodontic therapy. Engineered from biodegradable polymers and incorporating therapeutic agents and bioactive components, this delivery system offers sustained antimicrobial activity and tissue regeneration. The nanoparticles adhere to dentin surfaces, providing prolonged drug exposure, reducing treatment frequency, and enhancing endodontic treatment efficacy.

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