

Hydrogel-based pharmaceutical composition with zebularine and retinoic acid for tissue regeneration

About the invention

The invention concerns a pharmaceutical composition composed of two sodium alginate-based hydrogel formulations containing, respectively, zebularine and retinoic acid.

When administered subcutaneously or directly to the site of tissue injury, both hydrogels undergo biodegradation while gradually releasing the active substances, which synergistically stimulate tissue regeneration.

The system enables controlled and prolonged release of the bioactive compounds, eliminating the need for multiple injections and maintaining a stable therapeutic level within the tissue.

The invention is designed for use in the treatment of chronic wounds, skin damage, peripheral neuropathies, and other conditions requiring activation of tissue repair processes.

IP protection

The invention is subject to European patent protection no.: EP22214353.9

Technology readiness level

TRL 4 – Technology validated in laboratory conditions



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Applications

- Regeneration and treatment of chronic wounds and skin injuries,
- Supportive therapy for tissue repair in peripheral neuropathies,
- Component of medical formulations for controlled release of regenerative agents.

Possible cooperation

- R&D collaboration in development of ready-to-use formulations and in vivo testing,
- Licensing and joint implementation for medical applications,
- Partnership with pharmaceutical and biotech companies for commercialization.