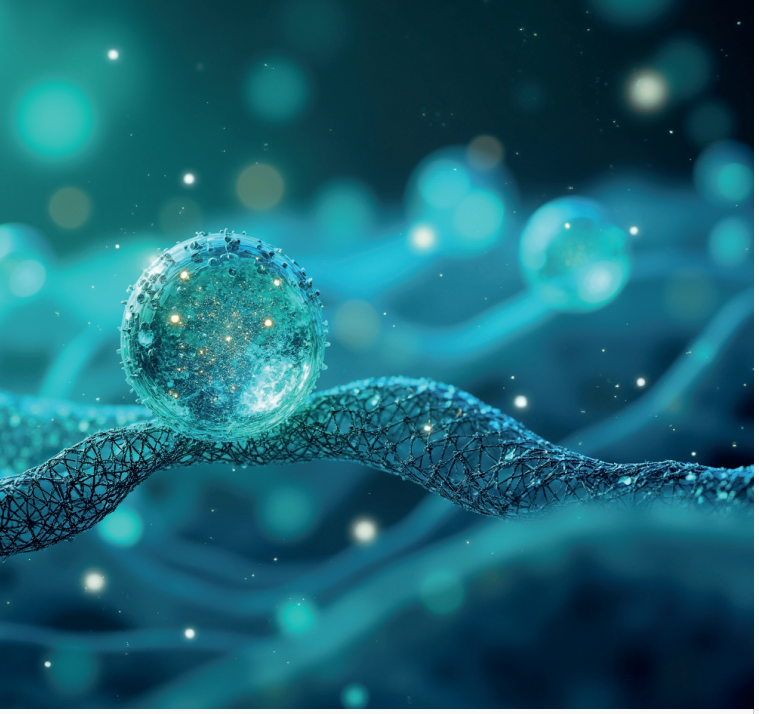


EXOSOMES LOADED-
BIOMIMETIC SCAFFOLDS

ExoMesh is a precision-engineered, thin biomimetic mesh embedded with exosomes derived from mesenchymal stem cells. Its biomimetic structure replicates the natural extracellular matrix, providing both mechanical and biochemical support to promote optimal cellular activity.

By stimulating cell migration, angiogenesis, and granulation tissue formation, **ExoMesh** accelerates tissue repair and enables faster, more stable wound closure. Designed as a non-invasive, pain-free alternative to injectable therapies, it offers high therapeutic efficacy at a lower cost — especially for chronic and diabetic wounds where healing is often slow and unpredictable
— **making advanced wound care smarter, safer, and more accessible.**

Human Umbilical Cord
Mesenchymal Stem Cells

EXOSOMES

MoleculeMed

Molecule Med Sdn Bhd (202001014785(1371105M)
100.3.041, Level 3 Block J
72A, Jalan Universiti, Seksyen 13,
46200 Petaling Jaya, Selangor
www.molecule-med.com
Tel : +6012 708 6005

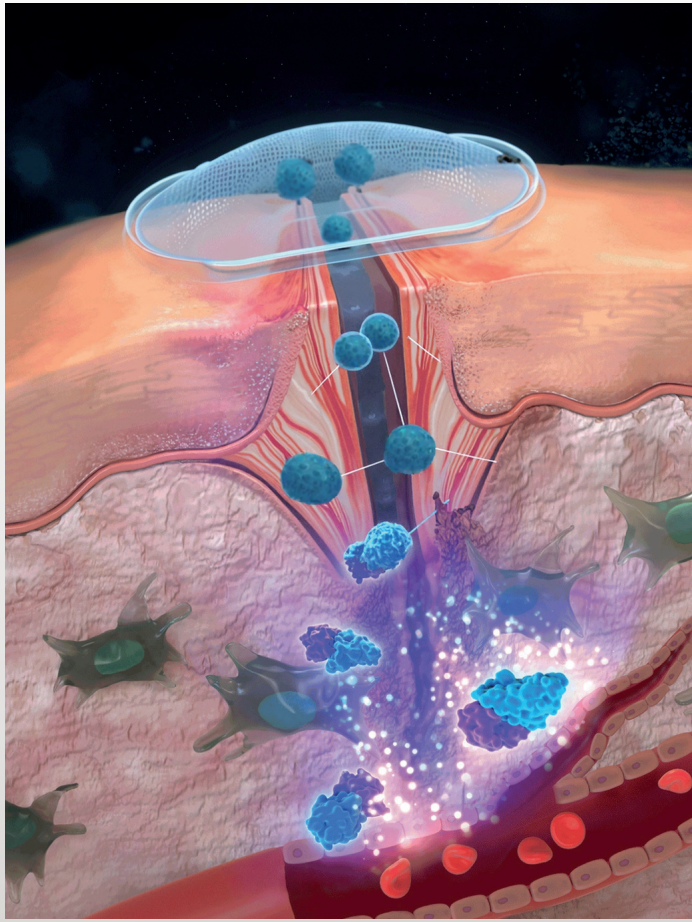
MoleculeMed

Biomimetic Mesh
The Mesh That Thinks Like Skin.

ExoMesh

Precision Healing Without the Needle.

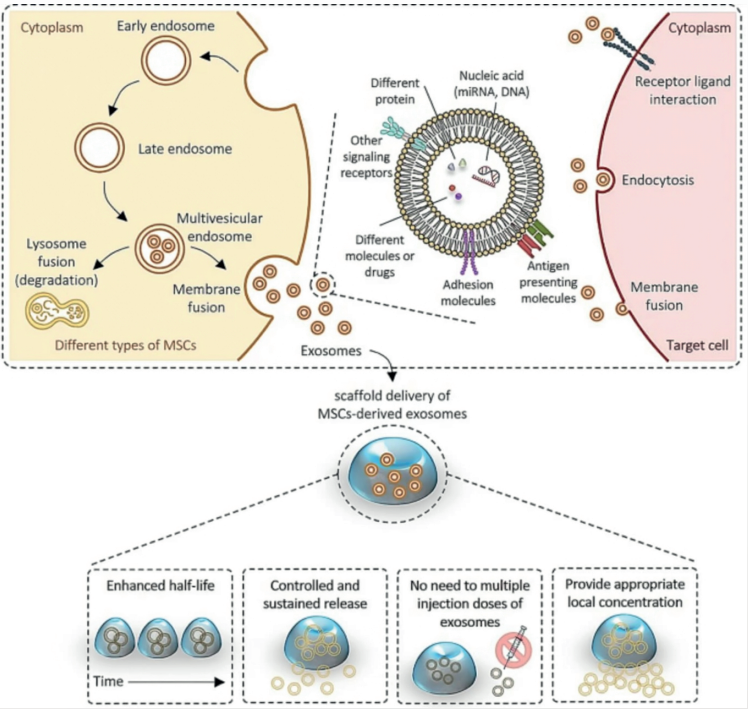
It's not just a dressing. It's the future of wound healing
— engineered, activated, and ready to transform care.



Smart Healing, Without the Needle

ExoMesh redefines how chronic and diabetic wounds are treated. This ultra-thin, biomimetic healing scaffold is infused with regenerative exosomes derived from mesenchymal stem cells, delivering continuous therapeutic signals right at the wound surface — **no injections**, **no pain**.

As **ExoMesh** gently integrates into damaged tissue, it initiates a cascade of regenerative activity — stimulating angiogenesis, enhancing cell migration, accelerating epithelial regeneration, and promoting robust granulation tissue formation. Its intelligent structure allows for controlled, sustained release of embedded exosomes, creating an ideal healing environment where the body can restore itself — naturally and effectively.



Among these bioactive signals, miR-223, a key component of MSC-derived exosomes, has been shown to regulate inflammation and promote wound resolution by modulating the pknox1 gene and driving macrophage polarization — a critical step in chronic wound recovery.



WHY ExoMesh MAKES A DIFFERENCE

Non-Invasive & Pain-Free
No Needles, No Discomfort

Localized Therapeutic Effect
Delivers exosomes directly to the wound surface

Tissue Engineering
Designed to mimic natural tissue architecture

Optimal Healing Environment
Controlled and sustained exosome release for consistent, long-term healing support

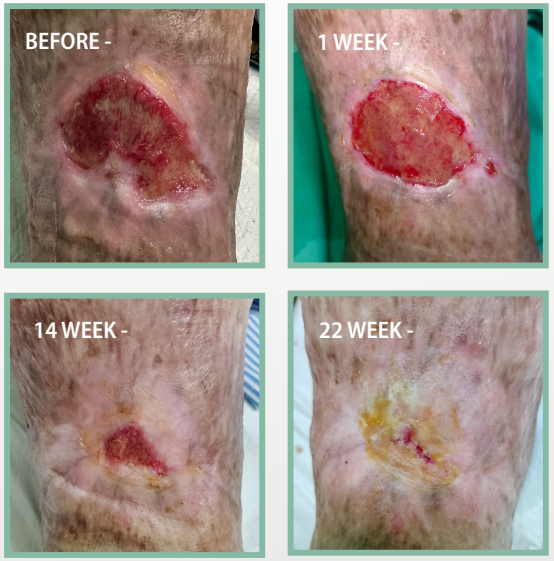
Easy To Use
Skip the injections —
this smart, dissolvable scaffold heals as it disappears.

ExoMesh offers a smarter alternative. This thin, biomimetic mesh delivers exosomes directly to the wound surface through a **non-invasive**, **pain-free** approach.

Faster, **Stronger**, and more **Stable Wound Closure**, without the cost, discomfort, or risks of traditional therapies. ExoMesh is the smarter, non-invasive solution for next-generation wound care.

Abstract:
A Case Report by Wound Care Unit, Hospital Teluk Intan

Accelerated Healing of a Chronic Wound in an Uncontrolled Diabetic Patient Using a Biomimetic Scaffold Loaded with MSC-Derived Exosomes



Results:

Wound size decreased by 74.3% (17.5 cm^2 to 4.5 cm^2) over 11 weeks, with substantial granulation tissue formation, progressive epithelialisation, and no infection or adverse effects.

This case demonstrates that MSC-derived exosome-loaded biomimetic scaffolds can accelerate healing in chronic diabetic wounds, achieving substantial size reduction without complications. These findings support their role as a safe, promising adjunctive therapy warranting further clinical evaluation.