FORCE REPAIR

INNOVATING CHRONIC WOUND TREATMENT

PARTNERS:

Akribes Biomedical · Joanneum Research · betthera · EWMA (The European Wound Management Association)

cnrs · histocell (Regenerative Medicine) · UPO (Università del Piemonte Orientale) · Asphalion (Knowledge from experience) · Università di Pavia

IDONIAL (Technology Centre) · cidetec nanomedicine · Inserm · vicomtech (Member of Basque Research & Technology Alliance)

université de Bordeaux · Bordeaux INP · EURICE (European Research and Project Office GmbH) · RISE (Research and Innovation Services d.o.o.)

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WEBSITE

www.forcerepair-wounds.eu

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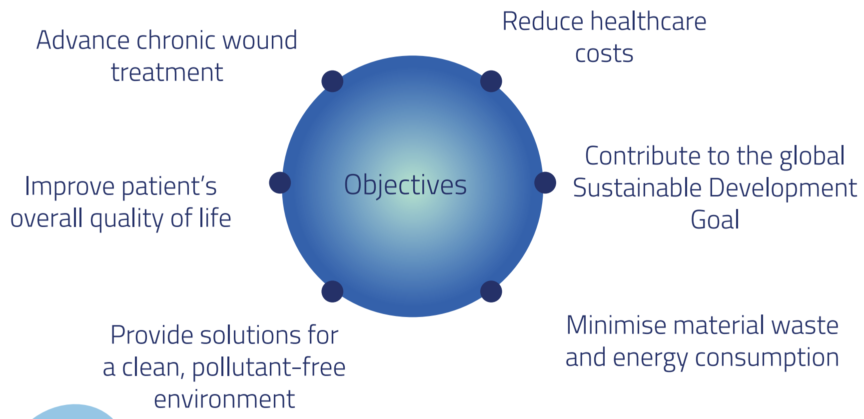
FORCE REPAIR Aims

Chronic wounds affect up to 2% of the population in the industrial world, with an expected increase in the next years. However, current therapies remain insufficient and costly.

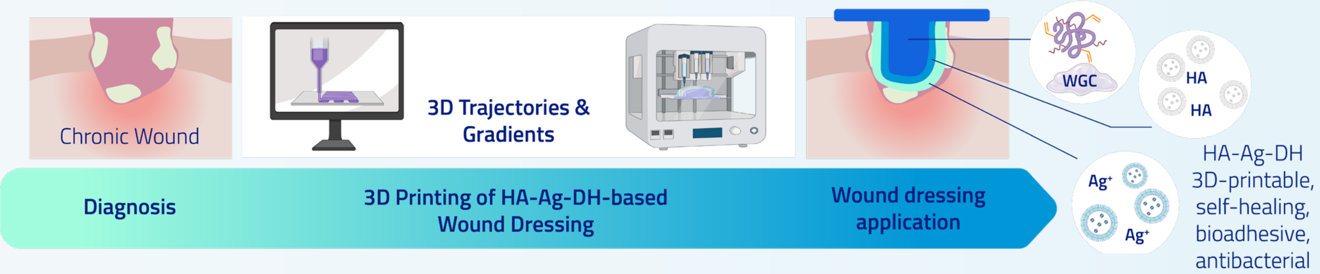
The FORCE REPAIR team sets out to advance chronic wound management by developing a smart, multifunctional, and cost-effective 3D-printed wound dressing to help i) fight bacterial infection, ii) control inflammation, iii) relieve skin tension and iv) stimulate healing.

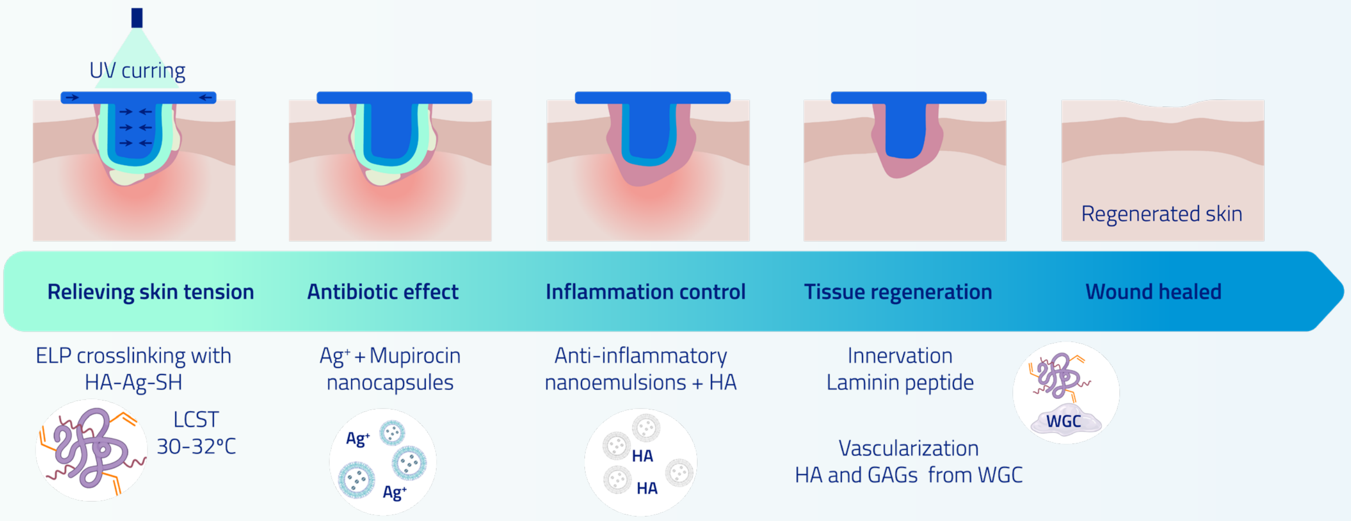


Scientific Approach

The FORCE REPAIR concept is based on a unique 3D printable hyaluronic acid-based self-healing hydrogel (HA-Ag-DH) with the placement of each component in a strategic location:

Special trajectory software of the 3D printed materials will help inducing contractile force withing the dressing to help wound closure.





1. antibacterial and bioadhesive layer in contact with the wound
2. anti-inflammatory to recreate the environment of healthy tissue
3. regenerative core to facilitate healing using elastin-like polypeptide (ELP) and Wharton Gel Complex® (WGC)

Regulatory frameworks, health technological assessment and marketability studies of the dressing validated on wound animal models will be taken into account.