

# The Fundamental Role of Advanced Dressings Based On Rigenase®, Triticum Vulgare Observational Study

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## Introduction

The antiseptic properties of the advanced dressings based on Triticum vulgare, through the patented Damor® Pharmaceuticals process starting from the Triticum seed, guarantee the speed of healing in the treatment of a wide range of skin wound, such as: ulcers, sores, surgical wounds, first and second degree burns, sunburn, abrasions, breast fissures secondary to breastfeeding, anal fissures. In particular, the Triticum vulgare extract contains starches, phospholipids and glycolipids, which create a protective barrier on the wound, protecting it. The presence of polyethylene glycol allows the recall and retention of water on the polymer chains, avoiding the loss of liquids. It is also able to attract fibroblastic cells that have the task of synthesizing collagen fibers, which are entrusted with the task of proceeding with the healing process. The aqueous extract of Triticum Vulgare, obtained from the entire germinated plant, mainly contains poly / oligosaccharide components with different biological properties capable of triggering the bioactive complex, interacting directly with the wound repair factors. The presence of Rigenase®, germinated wheat extract, guarantees protection from the external environment.

## Method

When the wounds are infected, their tendency to heal is much slower, consequently scarring is slowed down, sometimes with a stop of the reactive phenomena of the tissue that oppose the repair. We conducted an observational study on 74 patients, including 41 women and 33 men aged between 8 and 92 years with various types of injuries:

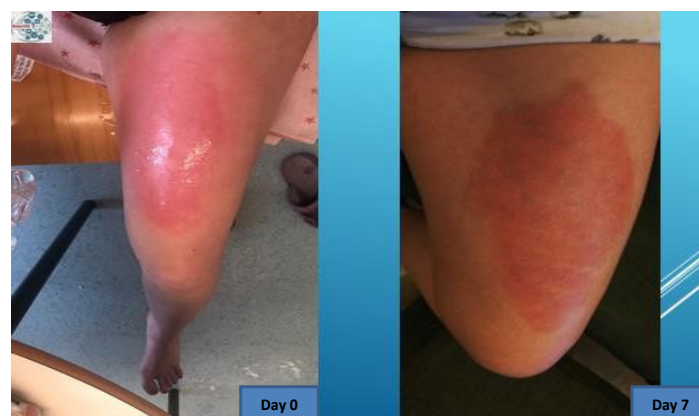
1. n. 27 - pressure ulcers
2. n. 19- dehiscence's of surgical wounds
3. n. 8 - 1st degree burns
4. n. 4 - 2nd degree burns
5. n. 7 - abrasions
6. n. 5 - breast fissures
7. n. 4 anal fissures

A control sample of 38 patients with well-healed wounds was also considered in this case report. On the injuries of the patients treated, Rigenase® was placed (by nebulization with a pressurized bot-

tle) assisted by gauze impregnated with the aqueous extract of triticum vulgare, up to the healing phase. In some cases, an additional secondary advanced dressing was used in relation to both the type of lesion and the quantity of exudate. From the analysis it was possible to observe the different phases of wound healing:

1. The inflammatory phase - around the 7th day of treatment,
2. The proliferative phase - around the 14th day of treatment,
3. The maturation phase - around the 21st day of treatment, characterized by an organized connective tissue and an epidermis with a keratinized outer layer.

## Case Report : woman, 28 years old



**Figure 1:** 2nd degree burn from overturning a pot containing boiling water

## Results

Nebulized Rigenase® in association with gauze based on triticum vulgare and Polihexanide has created an optimal environment for faster re-epithelialization. It reduced and normalized the inflammatory response, hydrating and protecting lesions and compromised skin, counteracting bacterial replication, reducing its charge. There was also a positive response to pain relief both during treatment and at rest. In fact, patients demonstrated high compliance with

treatment both with the Fitostimoline gauzes formulation and with the hydrogel formulation. Furthermore, they were well tolerated in terms of adverse effects at the application site.

Rigenase® has shown a powerful antioxidant capacity, exerting a significant radical washing activity with consequential acceleration of the skin wound repair process, while triticum vulgare has also revealed anti-inflammatory properties as well as providing a fundamental start for the collagen scaffold and elastin.

In the evaluation of the final skin inspection, a valid quality of the scar was found, showing an effective tensiometric strength.



**Figure 2:** Complete healing, elastic skin, without scars

## Conclusions

Thanks to the particular formulation of Rigenase®, associated and supported by gauze based on triticum vulgare and polyhexanide, the favorable conditions for a rapid and correct re-epithelizing action on the skin have been guaranteed and created, favoring the increase in hydration of the horny layer, protection of scar tissue from bacterial contamination, modulation of the expression of tissue growth factors, reduction of itching and discomfort associated with scarring. The component, based on plant extracts, has proven to be the gold standard in wound promotion and healing, guaranteeing tissue repair by activating the interaction of the cellular matrix and subsequent collagen synthesis.

The active components of Fitostimoline®-based products stimulate tissue repair processes, stimulate chemotaxis and fibroblastic maturation, significantly increasing the fibroblastic index, which are crucial points in the repair processes.

The quality of the normotrophic presenting scar was similar in all cases observed with a satisfactory aesthetic effect [1-3].

## References

1. Sanguigno L, Minale M, Vannini E, Arato G, Riccio R, et al. (2015) Oligosaccharidic fractions derived from *Triticum vulgare* extract accelerate tissutal repairing processes in in vitro and in vivo models of skin lesions. *J Ethnopharmacol* 159: 198-208.
2. Portou MJ, Baker D, Abraham D, Tsui J (2015) The innate immune system, toll-like receptors and dermal wound healing: A review. *Vascul Pharmacol* 71: 31-63.
3. Ariel A, Timor O (2013) Hanging in the balance: endogenous anti-inflammatory mechanisms in tissue repair and fibrosis. *J Pathol* 229: 250-263.

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