

# Effect of the new lipido-colloid micro-adherent absorbent dressing\* on fibroblast proliferation *in vitro*

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## INTRODUCTION

During the skin healing process, fibroblasts migrate to the wound zone, proliferate and synthesise the extracellular matrix to form granulation tissue. The fibroblasts then differentiate *in situ* into myofibroblasts, which, thanks to their contractile properties, lead to contraction of the granulation tissue, thereby bringing the wound margins closer together. The aim of this study was therefore to assess the behaviour of TLC Contact, a component of the new **lipido-colloid micro-adherent absorbent dressing\***, on fibroblasts *in vitro*, specifically analysing its effect on the proliferation of cultured normal human dermal fibroblasts (NHDF).

## MATERIAL AND METHODS

NHDF were cultured in 10% DMEM serum, and the TLC Contact was applied to the cell layer for 24, 48 or 72 hours. The cytotoxicity was assessed by means of an MTT test and cell proliferation by incorporation of tritiated thymidine. The effects on the ultrastructure of the cells were analysed by confocal laser microscopy after specific labelling of the tubulin (green) and actin (red).

## RESULTS

### Cell cytotoxicity

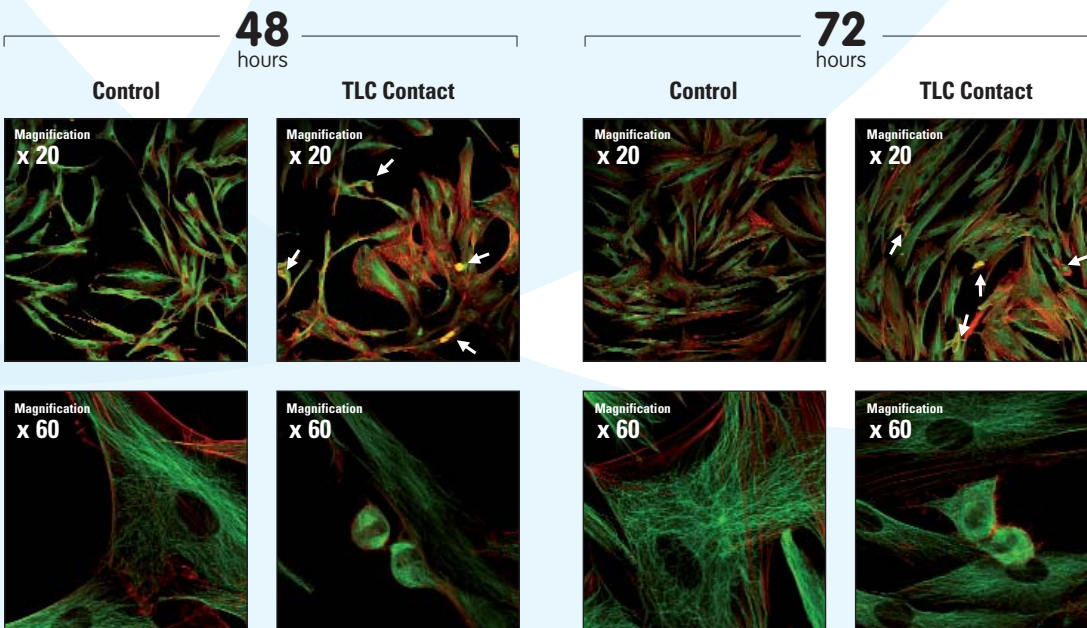
Cell viability (% of control)			
	24h	48h	72h
Control	100	100	100
TLC Contact	96	96	104

TLC Contact does not present any cell cytotoxicity after 24, 48 and 72 hours.

TLC Contact significantly stimulates cultured fibroblast proliferation after 24, 48 and 72 hours.

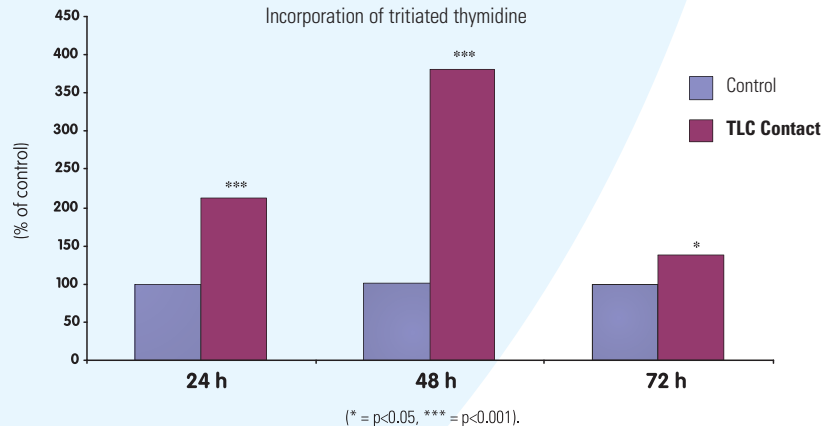
### Fibroblast proliferation

Cell ultrastructure



### Fibroblast proliferation

Incorporation of tritiated thymidine



## CONCLUSION

This study established that, thanks to its TLC Contact the new **lipido-colloid micro-adherent absorbent dressing\*** microadherent dressing stimulates the proliferation of human fibroblasts *in vitro*, a key activity to guarantee optimum healing *in vivo*.

\* Brand name: The new lipido-colloid micro-adherent absorbent dressing\* is UrgeCell® Contact from Laboratoires URGO.