



BEAUTY IS AN ART, WE MADE IT A SCIENCE

FILLMED
LABORATOIRES

NEW ZEALAND USE ONLY

Confidential – Internal use only



NCTF®

SCIENTIFIC DATA

NEW ZEALAND USE ONLY



IN-VITRO STUDY
NCTF®

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NCTF® - UNIQUE & EXCLUSIVE FORMULA



Clinical, Cosmetic and Investigational Dermatology Dovepress
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8 Open Access Full Text Article EXPERT OPINION

Polycomponent mesotherapy formulations for the treatment of skin aging and improvement of skin quality

The article was published in the following Dove Press journal:
Clinical, Cosmetic and Investigational Dermatology
7 April 2015
<https://doi.org/10.2195/1531-137.151>

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Abstract: Skin aging can largely be attributed to dermal fibroblast dysfunction and a decrease in their biosynthetic activity. Regardless of the underlying causes, aging fibroblasts begin to produce elements of the extracellular matrix in amounts that are insufficient to maintain the youthful appearance of skin. The goal of mesopreparations is primarily to slow down and correct changes in skin due to aging. The rationale for developing complex polycomponent mesopreparations is based on the principle that aging skin needs to be supplied with the various substrates that are key to the adequate functioning of the fibroblasts. The quintessential example of a polycomponent formulation - NCTF® (New Cellular Treatment Factor) - includes vitamins, minerals, amino acids, nucleotides, coenzymes and antioxidants, as well as hyaluronic acid, designed to help fibroblasts function more efficiently by providing a more optimal environment for biochemical processes and energy generation, as well as resisting the effects of oxidative stress. *In vitro* experiments suggest that there is a significant increase in the synthetic and prophylactic activity of fibroblasts with treated NCTF, and a significant increase in the ability of cells to resist oxidative stress. The current article looks at the rationale behind the development of polycomponent mesopreparations, using NCTF as an example.

Keywords: mesotherapy, skin aging, skin quality

Introduction

Our knowledge of skin as a complex, immune, multifunctional organ is constantly evolving, including our insights into the skin aging process.¹⁻⁴ Recent histological, biochemical and biomolecular evidence has broadened our understanding of skin cell function and aging and provided new information on cell-to-cell interactions and particular features of intermolecular transport and communication.^{5,6} This has provided an important stimulus to the development of new mesotherapy solutions as anti-aging treatments. Mesotherapy is a technique that involves micro-injections of therapeutic substances, such as hyaluronic acid, vitamins, minerals, and amino acids into the superficial papillary dermis of the skin.⁷ This allows active and essential ingredients to come directly into contact with the dermal fibroblast cells that are key to the more favorable appearance of younger skin, and (in theory) have a beneficial effect on metabolic processes.

The range of available mesotherapy solutions widens choice for the practitioner, but also presents them with a challenge. In addition to having a good fundamental knowledge of dermatology and cosmetology, the practitioner may also benefit from an understanding of the physiological effects of the individual components of a particular formulation. Such knowledge should help to demystify the rationale behind the

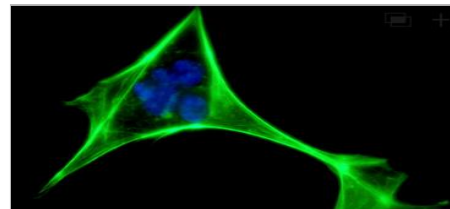
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Clinical, Cosmetic and Investigational Dermatology 2015:08 151-157 | 151

[THE MOST COMPLETE BIOREVITALISING FORMULA]

REBOOSTS AGEING FIBROBLAST ACTIVITY FOR A REVERSE AGEING EFFECT



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ANTIOXIDANT EFFECTS: human lymphoid cells (Jurkat)



ANTIOXIDANT EFFECTS OF NCTF POWDER:

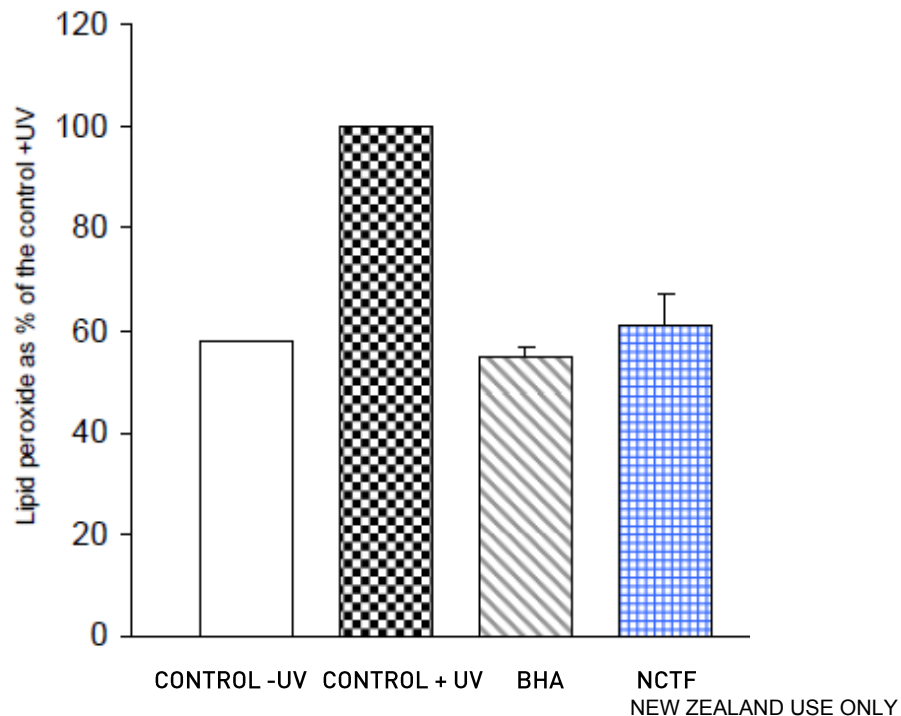
Effect on the production of H_2O_2 and LIPID PEROXIDES (LP) in human lymphoid cell culture exposed or not to UV (Fluorescence Cytometry Analysis)

- Evaluate the antioxidant efficacy of NCTF
- Quantification of H_2O_2 and Lipid Peroxides (LP) in human lymphoid cells (Jurkat) exposed or not to UVA + UVB irradiation
- Using specific fluorescent probe

▪ Antioxidant reference : BHA
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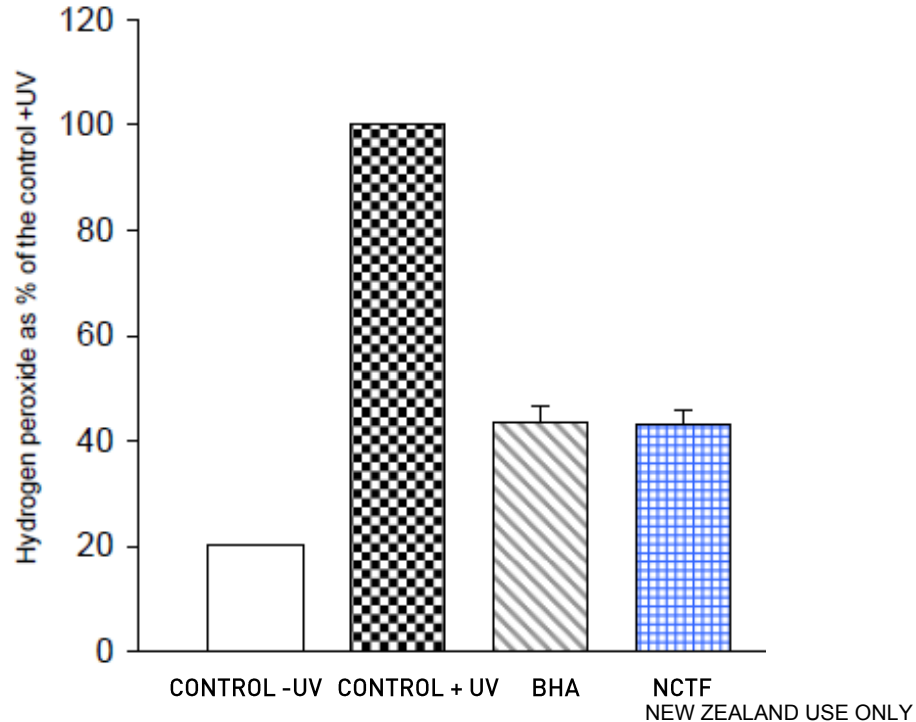
RESULTS: CELLULAR PROTECTION AGAINST LP



RESULTS: REDUCTION OF INTRACELLULAR QUANTITY OF LIPID PEROXYDES (LP) OF IRRADIATED CELLS TREATED WITH NCTF® AND BHA



RESULTS: CELLULAR PROTECTION AGAINST H2O2



RESULTS: REDUCTION OF INTRACELLULAR QUANTITY OF H2O2 OF IRRADIATED CELLS TREATED WITH NCTF® AND BHA



CONCLUSION



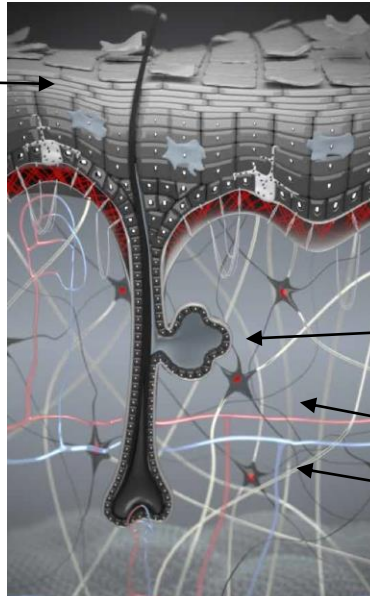
- NCTF has a strong antioxidant activity compared to the anti-oxidant reference BHA
- Contributes to cellular protection against oxidative stress (LP and H₂O₂)
- Double effect: correction (clinical instrumental study) and prevention (in vitro study)

NEW ZEALAND USE ONLY



PROVEN MODE OF ACTION: SKIN LAYERS STIMULATION

ANTI-FREE RADICAL ACTION **90%**



256% COLLAGEN STIMULATION

148% FIBROBLASTS STIMULATION

366% VISCOELASTIC REGENERATION

CREATES AN OPTIMAL ENVIRONMENT FOR FIBROBLASTS

NEW ZEALAND USE ONLY



NCTF® - STRONG CLINICAL DEVELOPMENT

/ PENETRATION DEVICES



SYRINGE



NEEDLE PEN



ROLLER



MESO GUN



NEW

NANOSOFT

CLINICAL STUDIES & EVIDENCE

MULTICENTER
CLINICAL STUDY
2008

BIONUTRIGLOW
CLINICAL STUDY
2018

OBSERVATIONAL
STUDY
2014

EX-VIVO STUDY
2006

CLINICAL
STUDY
2019

INSTRUMENTAL
CLINICAL STUDY
2014

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EX-VIVO STUDY
EVALUATE THE PHOTOAGEING
EFFECT OF NCTF®

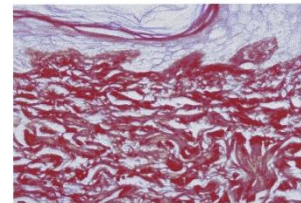
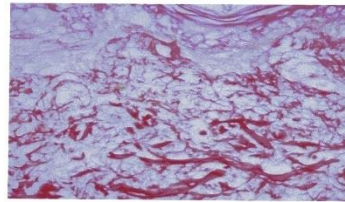
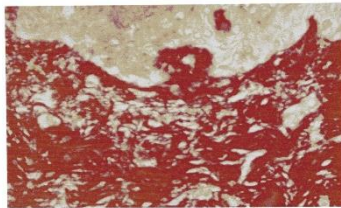
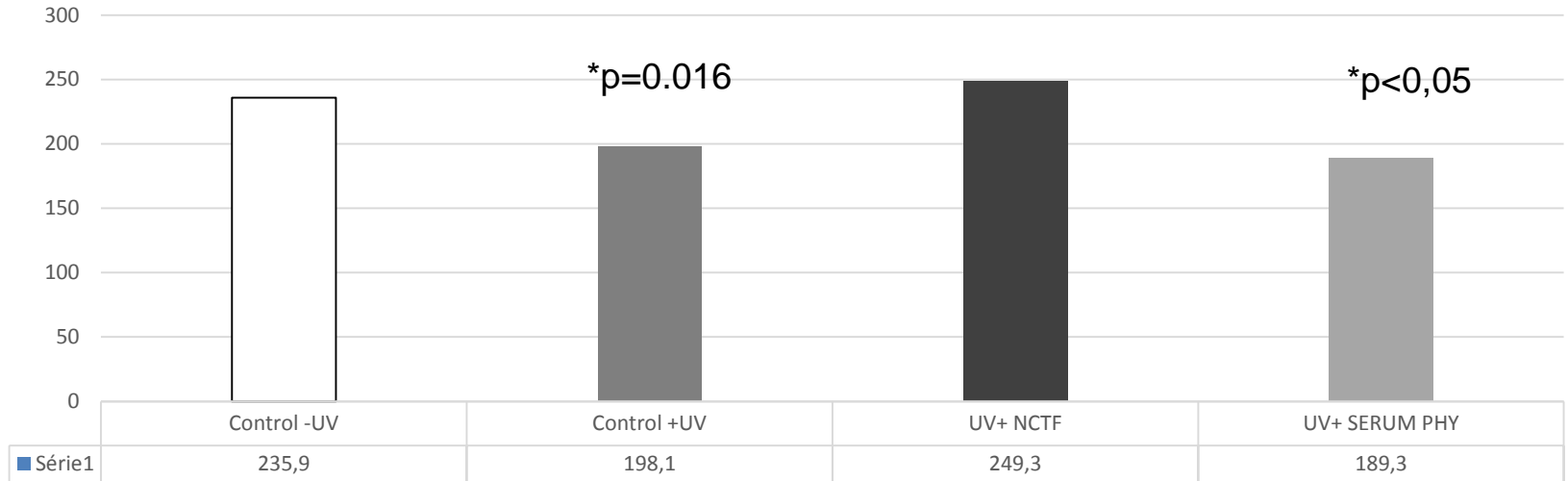
NEW ZEALAND USE ONLY

EX-VIVO STUDY

- Ex-vivo study on human tissue, during 15 days (equal to 2 months in vivo)
- Human skin exposed to UVA- UVB
- Multi-injection technique (point per point, nappage)
- NCTF® vs SERUM PHY
- Evaluation: Biopsy and collagen/ elastin marking



RESULTS: Histological analysis of collagen



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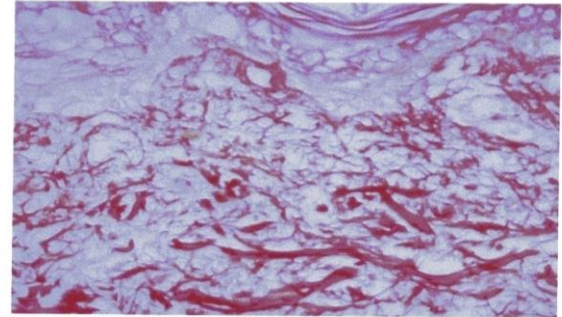


CONCLUSION: HISTOLOGICAL ANALYSIS

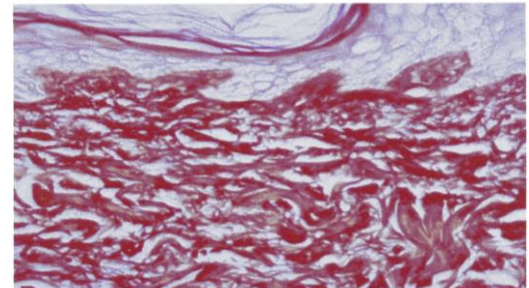
- After 1 session of treatment with NCTF®, the UV- exposed tissue is completely restored (collagen)

⇒ NCTF® has a proven effect against photoageing

AFTER IRRADIATION



AFTER TREATMENT WITH NCTF



INSTRUMENTAL CLINICAL STUDY (2014)



INSTRUMENTAL CLINICAL STUDY



SUBJECTS: 18 women, 49 mean age



PROTOCOL: 3 months / 5 sessions



PROPERTIES: Glow- Wrinkles-Pores size- Dermis Density - Fatigue



+



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CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE



PROTOCOL



NEW ZEALAND USE ONLY



INSTRUMENTAL CLINICAL STUDY (2014)

GLOW EVENESS +49%

Dermatologist Scoring



Instrumental Study realized by an independant Clinical Research Center in Dermatology - (GREDECO, Paris, France) on 18 subjects.

Scoring / Chromatic analysis

NEW ZEALAND USE ONLY

CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE



INSTRUMENTAL CLINICAL STUDY (2014)

HOMOGENEITY +52%

Chromameter Konica Minolta (CR/DP-400®)



Instrumental Study realized by an independant Clinical Research Center in Dermatology - (GREDECO, Paris, France) on 18 subjects.

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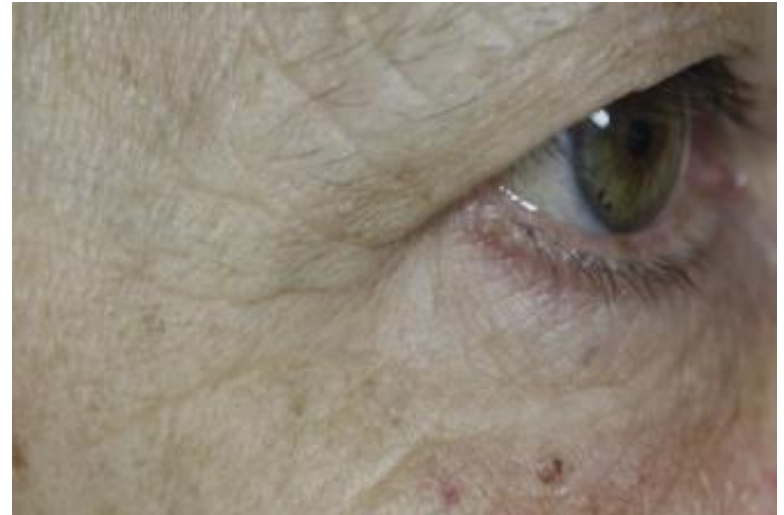
CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE



INSTRUMENTAL CLINICAL STUDY (2014)

WRINKLES VOLUME -33%

Profilometric analysis - Skin Station®, unit: [Volume/ mm²]



Instrumental Study realized by an independent Clinical Research Center in Dermatology - (GREDECO, Paris, France) on 18 subjects.

NEW ZEALAND USE ONLY

CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE

Scoring / Profilometric measure



INSTRUMENTAL CLINICAL STUDY (2014)

PORE SIZE -59%

Macrophotography Proscope x30



Instrumental Study realized by an independent Clinical Research Center in Dermatology - (GREDECO, Paris, France) on 18 subjects.

NEW ZEALAND USE ONLY

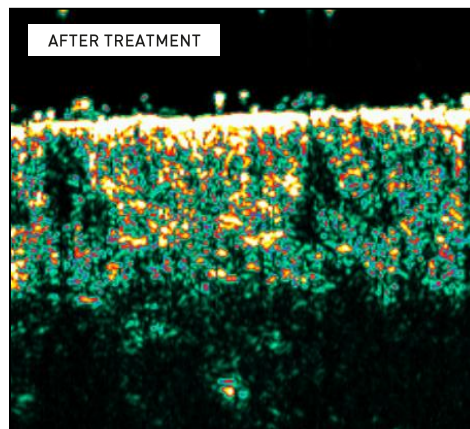
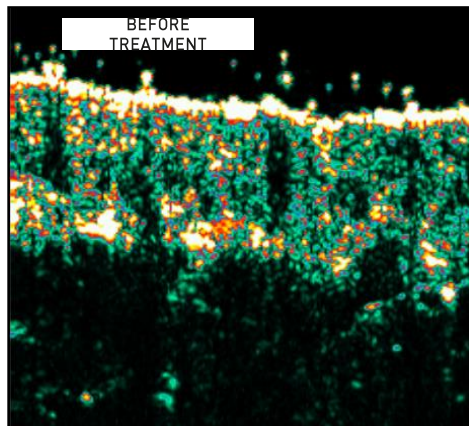
CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE



INSTRUMENTAL CLINICAL STUDY (2014)

TONICITY, FIRMNESS

HIGH FREQUENCY ECHOGRAPHY monaderm® 20mhz



GREEN: COLLAGEN
YELLOW: NEW COLLAGEN

+ 24 %

DERMIS
DENSITY (Increase of collagen fibers)

+ 20 %

DERMIS
THICKNESS

Instrumental Study realized by an independent Clinical Research Center in Dermatology - (GREDECO, Paris, France) on 18 subjects.

NEW ZEALAND USE ONLY

CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE



INSTRUMENTAL CLINICAL STUDY (2014)

PATIENT SELF ASSESSMENT AFTER 5 SESSIONS



8/10 WOMEN WILL CHOOSE NCTF IN CASE THEY HAVE TO REPEAT A BIO REVITALISATION TREATMENT

Instrumental Study realized by an independant Clinical Research Center in Dermatology - (GREDECO, Paris, France) on 18 subjects.

NEW ZEALAND USE ONLY




CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE



OBSERVATIONAL PROSPECTIVE STUDY



OBSERVATIONAL PROSPECTIVE STUDY

-  SUBJECTS: 77 subjects, aged from 34 to 68 years
-  PROTOCOL: 3 sessions, 15 days to 1 month apart
-  PROPERTIES: Wrinkles-Homogeneity



+



NEW ZEALAND USE ONLY

CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE



AFTER 3 SESSIONS VISIBLE RESULTS



BEFORE



AFTER PHOTOS

NEW ZEALAND USE ONLY

CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE



AFTER 3 SESSIONS VISIBLE RESULTS



BEFORE



AFTER PHOTOS

NEW ZEALAND USE ONLY

CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE



AFTER 3 SESSIONS VISIBLE RESULTS



BEFORE



AFTER PHOTOS

NEW ZEALAND USE ONLY

CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE



AFTER 3 SESSIONS VISIBLE RESULTS



BEFORE



AFTER PHOTOS

NEW ZEALAND USE ONLY

CONFIDENTIAL INTERNAL DATA- DO NOT DIFFUSE





NANOSOFT & NCTF 135HA (CE)
CASE STUDIES

NEW ZEALAND USE ONLY



NANOSOFT™ by FILLMED INTRADERMAL INJECTION OF NCTF®

After 4 sessions



VISIBLE RESULT EVENT AFTER 1 SESSION INTRADERMAL INJECTION OF NCTF®



DR RIEKIE SMIT

1 month after only 1 session

VISIBLE RESULT EVENT AFTER 1 SESSION INTRADERMAL INJECTION OF NCTF®



1 month after only 1 session

NANOSOFT™ by FILLMED INTRADERMAL INJECTION OF NCTF®



DR RIEKIE SMIT

6 weeks after 2 sessions

SIDE EFFECTS?

- **PAPULES**

Disappear within 1 – 24 hours



DR RIEKIE SMIT



NEW ZEALAND USE ONLY



EX VIVO STUDY- Injection at T0, Cut at T5 min, SERIAL PHOTOGRAPHY TILL 24H



NANOSOFT & NCTF

	PHOTO AT T0	PHOTO AT T2H	PHOTO AT T6h	PHOTO AT T24H
S4				
S5				
S6				

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NCTF®

CYTOTOXICITY STUDY

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CYTOTOXICITY STUDY

- **Objective :**

The composition of NCTF 135 is similar to the cell culture medium. It means that the cells are in their physiologic environment.

The objective of the study is to evaluate the cytotoxicity of NCTF and the one of its main competitors on human primary fibroblasts and keratinocytes.

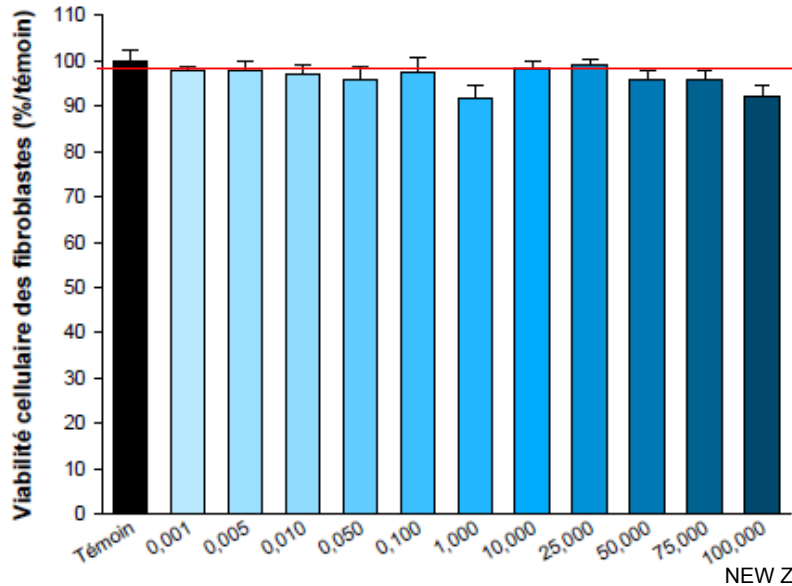


STUDY NCTF® 135- FIBROBLASTS

RESULTS ON FIBROBLASTS VIABILITY AND PROLIFERATION

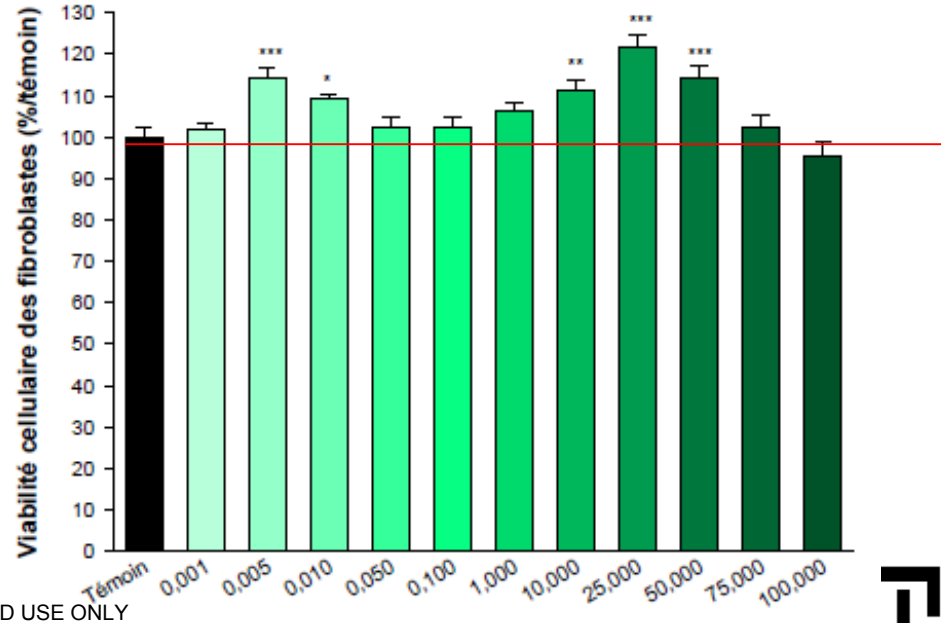
COMPETITOR 1

No stimulation of the fibroblasts



NCTF® 135

Stimulates the fibroblasts in almost all concentrations

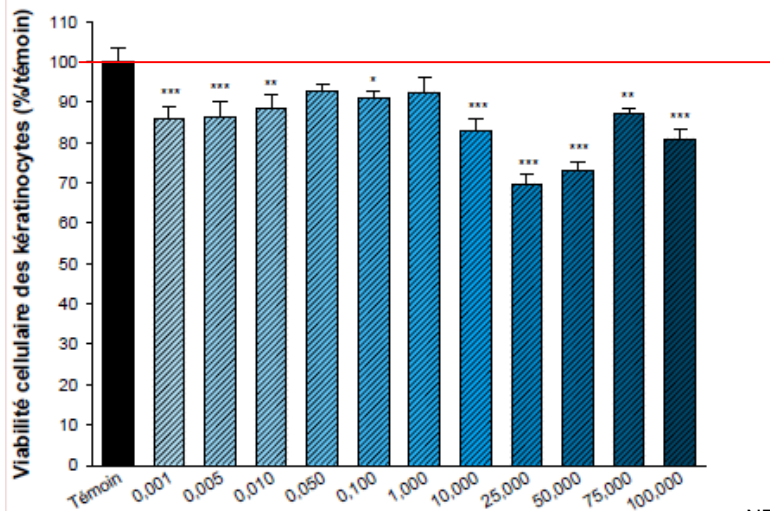


STUDY NCTF® 135- KERATINOCYTES

RESULTS ON KERATINOCYTES VIABILITY AND PROLIFERATION

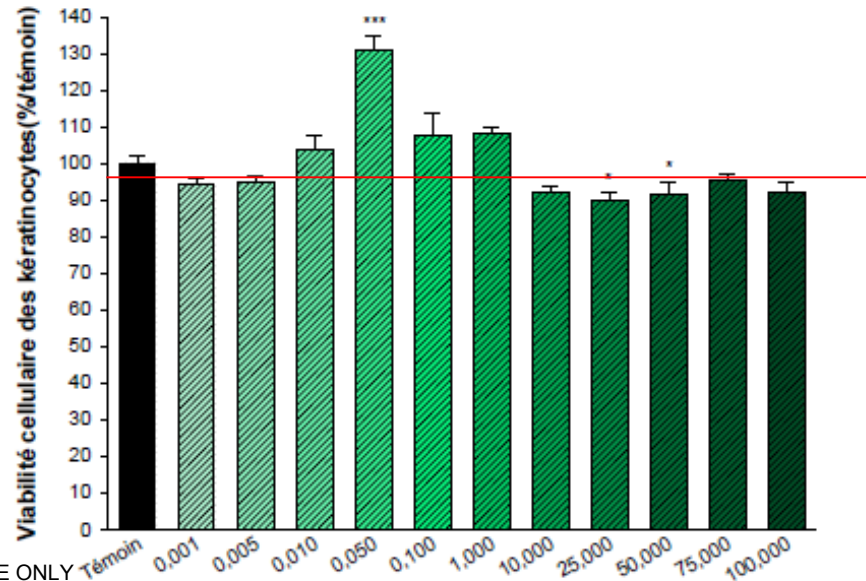
COMPETITOR 1

Cytotoxic activity for almost all concentrations



NCTF® 135

No cytotoxic activity even with a concentration of 100%



NEW ZEALAND USE ONLY

RESULTS : NCTF® SAFE AND EFFICIENT

Conclusion:

NCTF®

- 1) No cytotoxicity observed with NCTF®, in human fibroblasts and keratinocytes.
- 2) NCTF® has a positive stimulating effect on both fibroblasts and keratinocytes.

COMPETITOR

- 1) Cytotoxicity observed in human keratinocytes (high concentrations) but not in fibroblasts.
- 2) No effect on human fibroblasts or keratinocytes.





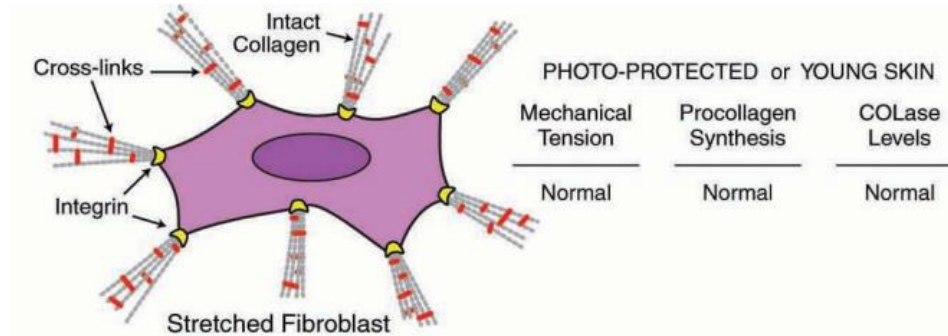
NCTF®

Contractile forces

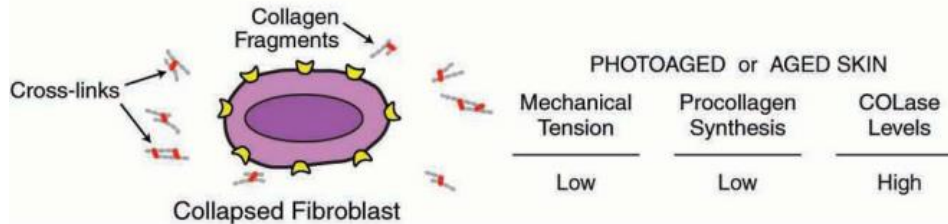
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AGED FIBROBLAST

YOUNG FIBROBLAST



AGED FIBROBLAST



NEW ZEALAND USE ONLY

Arch Dermatol. 2008 May ; 144(5): 666–672



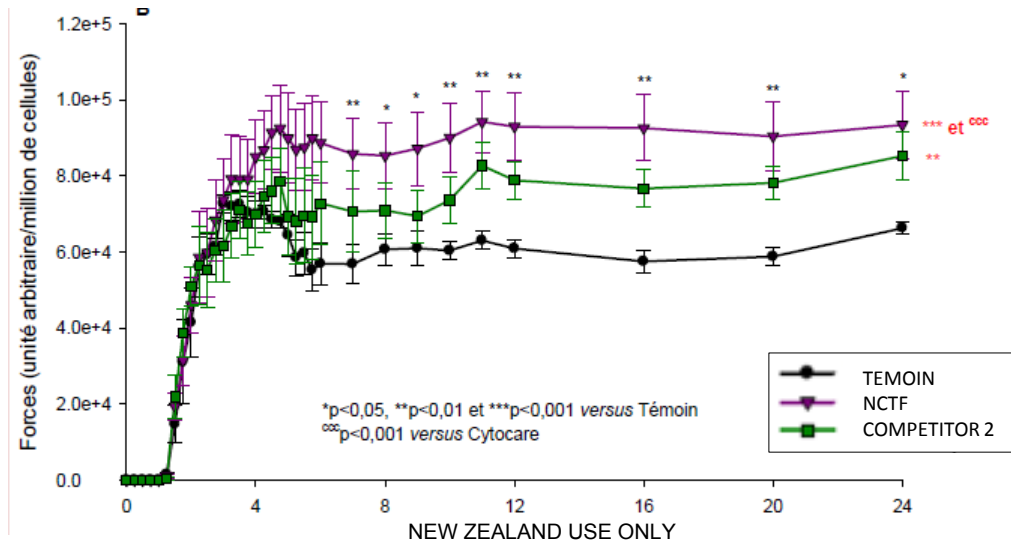
COMPARATIVE STUDY NCTF vs COMPETITOR 2

RESTORATION OF CONTRACTILE PROPERTIES OF WRINKLES FIBROBLASTS

COMPARED TO NORMAL AGED FIBROBLASTS WRINKLE FIBROBLASTS SHOWED A SIGNIFICANT DECREASE IN CONTRACTILE FORCES

RESULTS

- NCTF significantly increased the contractile forces of aged wrinkle fibroblasts
- NCTF has a better effect on contractile properties of wrinkle fibroblasts than COMPETITOR 2





BEAUTY IS AN ART, WE MADE IT A SCIENCE

THANK YOU

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