

BIO-MEDICAL APPLICATION OF MEDICAL GRADE GRAPHENE-BASED DERIVATIVES

Graphenano
MEDICAL CARE



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INSTITUTIONAL COLLABORATIONS



INDUSTRIAL AND INTELLECTUAL PROTECTION OF BIOGRAPH® AND APPLICATIONS

PATENTS



WO 2020/016319 A1. detallar el objeto de la patente

WO 2020/016324 A1 detallar el objeto de la patente

EP21382355 - Graphene nanomaterial for use as fat adsorbent

SCIENTIFIC ARTICLES



Rivera-Briso AL, Int J Biol Macromol. 2019; 8130(19)

Elias L, Int J Mol Sci. 2019;20(14).

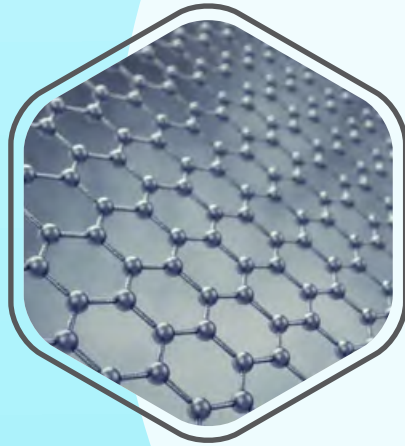
Llorens-Gámez M, Polymers (Basel). 2018;10(4).

Salesa B, Polymers (Basel). 2019; 11(3).



Griera M, Mater Sci Eng C Mater Biol Appl, 2021 (EN PREPARACIÓN)

PATENTED PROCESS



GRAPHENE



BIOGRAPHS:

(medical grade graphene derivatives, free of impurities, deprogenated and with limited particle size)



BIOGRAPHS:

(formulated as per specific biomedical use)

BIOGRAPH[®] SAFETY

SAFETY TESTED BY GRAPHENANO
MEDICAL CARE



CULTURED CELL
LINES AND PRIMARY
CULTURE

Viability
(by trypan blue cellular exclusion)

Toxicity
(cellular metabolism by MTT)

Immunological reactivity
(of human PBMCs)

SAFETY TESTED BY CERTIFIED
COMPANY



Mutagenicity

Genotoxicity

Ocular irritation

Dermal irritation

GRAPHENANO MEDICAL CARE RESEARCH & BUSINESS INTERESTS



COSMETICS



METABOLIC HIGH PREVALENCE DISEASES



RENAL AND HEPATIC HIGH PREVALENCE DISEASES



TISSUE REGENERATION



COSMETICS

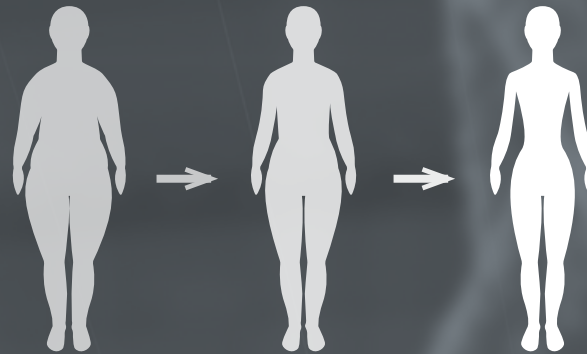
Descubre la mejor
versión de **tu piel.**

*Graphene & Microalgae
Natural Science*

 **AcquaGraph**



BIOGRAPH SLIM AS SKIN CONDITIONER



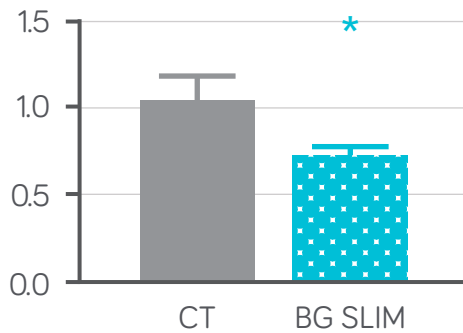
Related patents:

WO 2020/016319 A1 and WO 2020/016324 A1

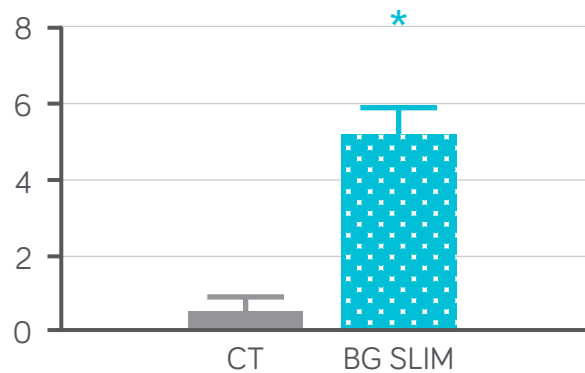
BIOGRAPH SLIM MODIFIES THE DIFFERENTIATION CAPACITY OF CULTURED ADIPOBLASTS

ADIPOGENESIS AND TRANS-DIFFERENTIATION MARKERS

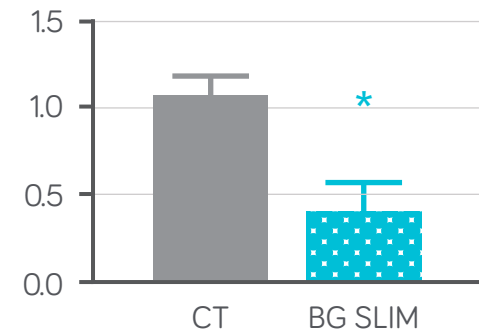
PPAR γ mRNA EXPRESSION
FOLD CHANGE (VS CONTROL)



UCP-1 mRNA EXPRESSION
FOLD CHANGE (VS CONTROL)

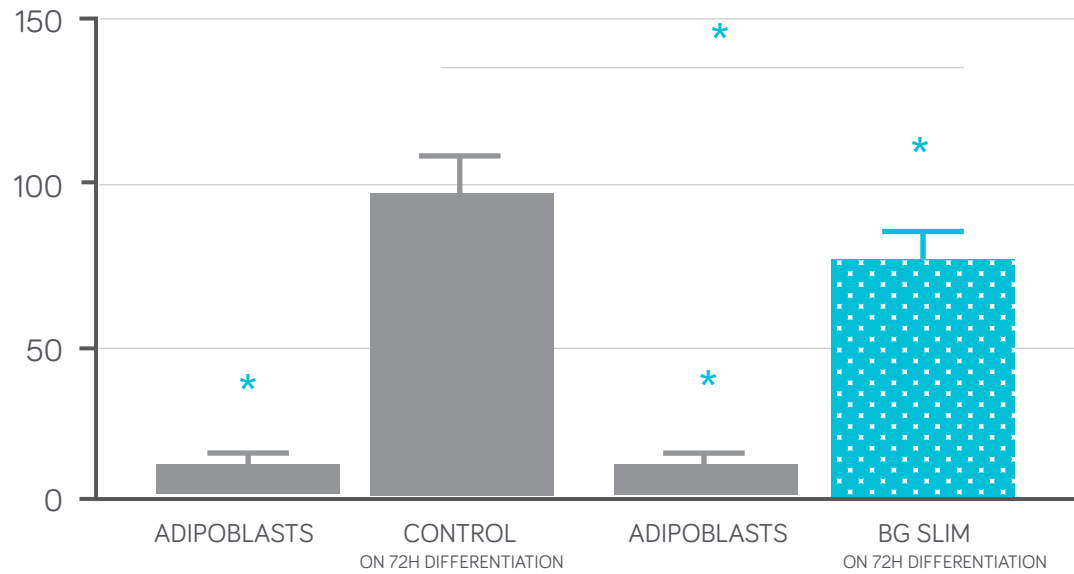


LEPTIN mRNA EXPRESSION
FOLD CHANGE (VS CONTROL)



BIOGRAPH SLIM REDUCES FAT STORAGE IN CULTURED ADIPOBLASTS DURING DIFFERENTIATION

ADIPOBLASTS TO ADIPOCYTES DIFFERENTIATION (% vs control)

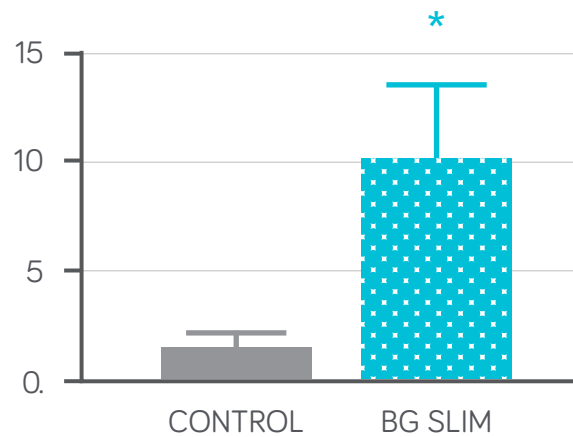


CELLULAR TRIGLYCERIDE STORAGE

BIOGRAPH SLIM LIPOLYSIS CAPACITY IN CULTURED ADIPOCYTES

LIPOLYSIS MARKER

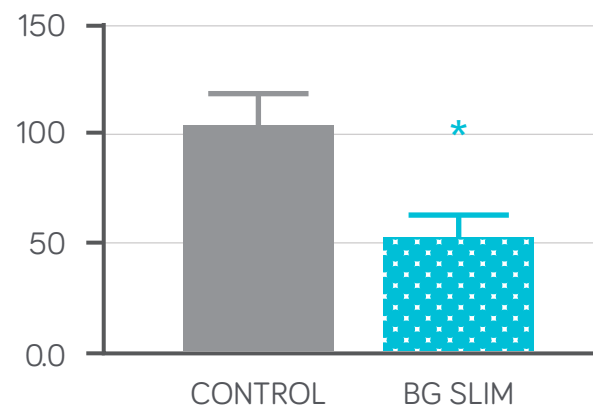
HSL MRNA EXPRESSION
FOLD CHANGE (VS CONTROL)



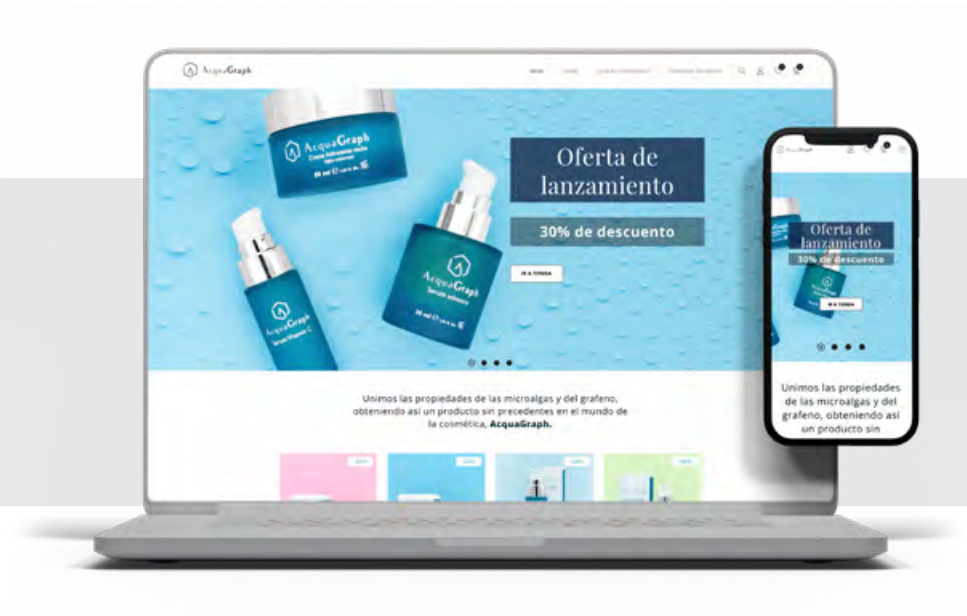
BIOGRAPH SLIM REDUCES FAT STORAGE IN FULL DIFFERENTIATED ADIPOCYTES

CELLULAR TRIGLYCERIDE STORAGE

ADIPOCYTES
DE-DIFFERENTIATION
% VS CONTROL



ACQUAGRAPH MARKETING AND SELLING CHANNELS



CURRENTLY ONLY ON-LINE SALES

www.acquagraph.com

NEXT STEPS

TO ENTER NEW SELLING CHANNELS:

- Pharmacies
- Para-pharmacies
- Perfumeries
- Retailers

DEFINITION ON:

- Merchandising materials
- Marketing & communication



LIPSTICK-LIP GLOSS

- Looking for Ultra-moisturising comfortable lipstick formula
- Looking for softly circulation stimulators (menthol) to create the appearance of plumped, fuller lips.
- Softer, healthier and plumper lips

TIPS FOR THE BES LIP-CONTOURING

- Exfoliated and hydrated lips.
- Make sure you take care of your lips, that they're not dry or rough.
- Otherwise, when you profile them, you will only visually enhance their bad state.

BIOGRAPH® & ACQUASEA

The perfect ingredients to be added in any lip care cosmetic product

Moisturizing effect
26.9 %

Immediately after product application on volunteers

Microcirculation improvement
16.7 %

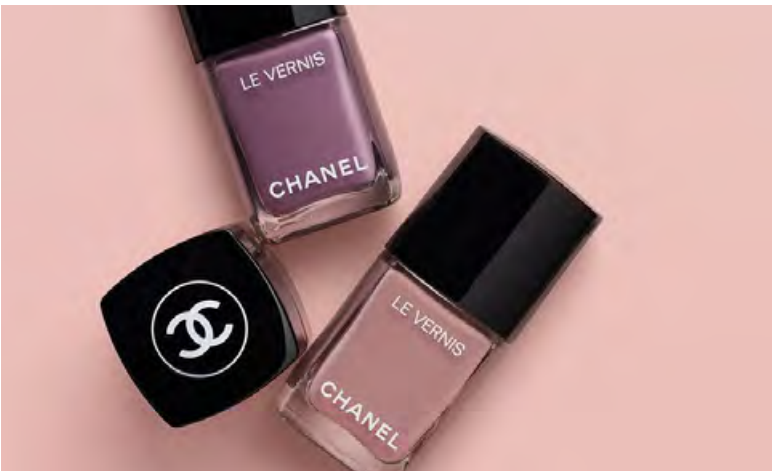
After 4 weeks, once/day

Tewl reduction
35.8 %

Immediately after product application on volunteers

Firming effect
18.3 %

After 4 weeks, once/day



LONG-LASTING NAIL POLISHES TO STAY CHIP-FREE FOR DAYS

SALLY HANSEN SALON MANICURE

A trusted drugstore beauty brand for years, Sally Hansen delivers on quality without sacrificing its low price point — and this long-lasting polish lives up to the legacy. The smooth and lustrous formula is enriched with keratin to help your nails get stronger, and the fast-drying polish can last up to 10 days even without a separate top coat.



HAIR CARE ANTI-FRIZZ HAIR PRODUCTS

ANTISTATIC PROPERTY OF GRAPHENE-COATED HAIR





PRIVATE LABEL FOR RECOGNISED PROFESSIONALS

DERMATOLOGISTS
MEDICAL AESTHETICIANS
PLASTIC SURGEONS

THE USE OF GRAPHENE BY PROFESSIONALS WILL HELP US TO:

- Publicize the new active ingredient unknown to the end consumer, through professionals
- Professional = safe
- Start business in pharmacie.

Currently already in contact with:

- Dr. Ivan Mañero – plastic surgeon
- Dra. M.J. Rubira- Medical aesthetician
- Dermatologists: Dra. Montse Saban



PARTNERSHIPS

To consider the possibility of partnerships with well-known international big companies in order to enjoy their commercial networks, selling channels, logistics and structures and speed up our international growth.

BLOCKBUSTER PRODUCT: licensing of AcquaGraph lipolytic anti-cellulite product

Global Cellulite Treatment Market Will Reach USD 4,015 Million By 2025: Zion Market Research

According to the report, the global cellulite treatment market was valued at USD 2,415 million in 2018 and is expected to generate around USD 4,015 million by 2025, growing at a CAGR of 7.5% between 2019 and 2025.

August 22, 2019 01:31 ET | Source: Zion Market Research

The cellulite treatment market is sectorized into non-energy-based (soft cellulite treatment, topical creams, and others) and energy-based (mechanical suction, cryolipolysis, mechanical suction and thermal, ultrasound, radiofrequency, and others).

By technique, the global cellulite treatment market includes non-invasive, minimally invasive, and others. Non-invasive technique accounted for the largest share globally in 2018, due to the high demand for non-invasive techniques in hospitals and specialized clinics.

METABOLIC HIGH PREVALENCE DISEASES

PATENT

EP21382355 - Graphene nanomaterial for use as fat adsorbent

METABOLIC HIGH PREVALENCE DISEASES

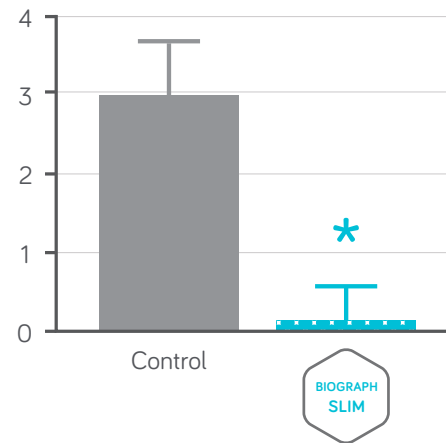
ORAL APPLICATION



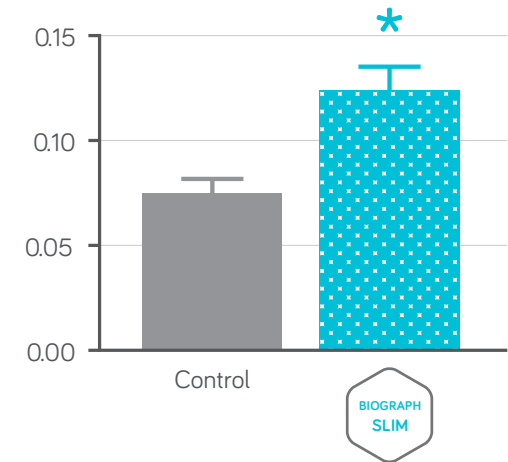
Obesity mice model (based on High-Fat Diet during six weeks)



BODY WEIGHT GAIN (g)



FAECAL LIPID/TOTAL FAECAL WEIGHT (g)

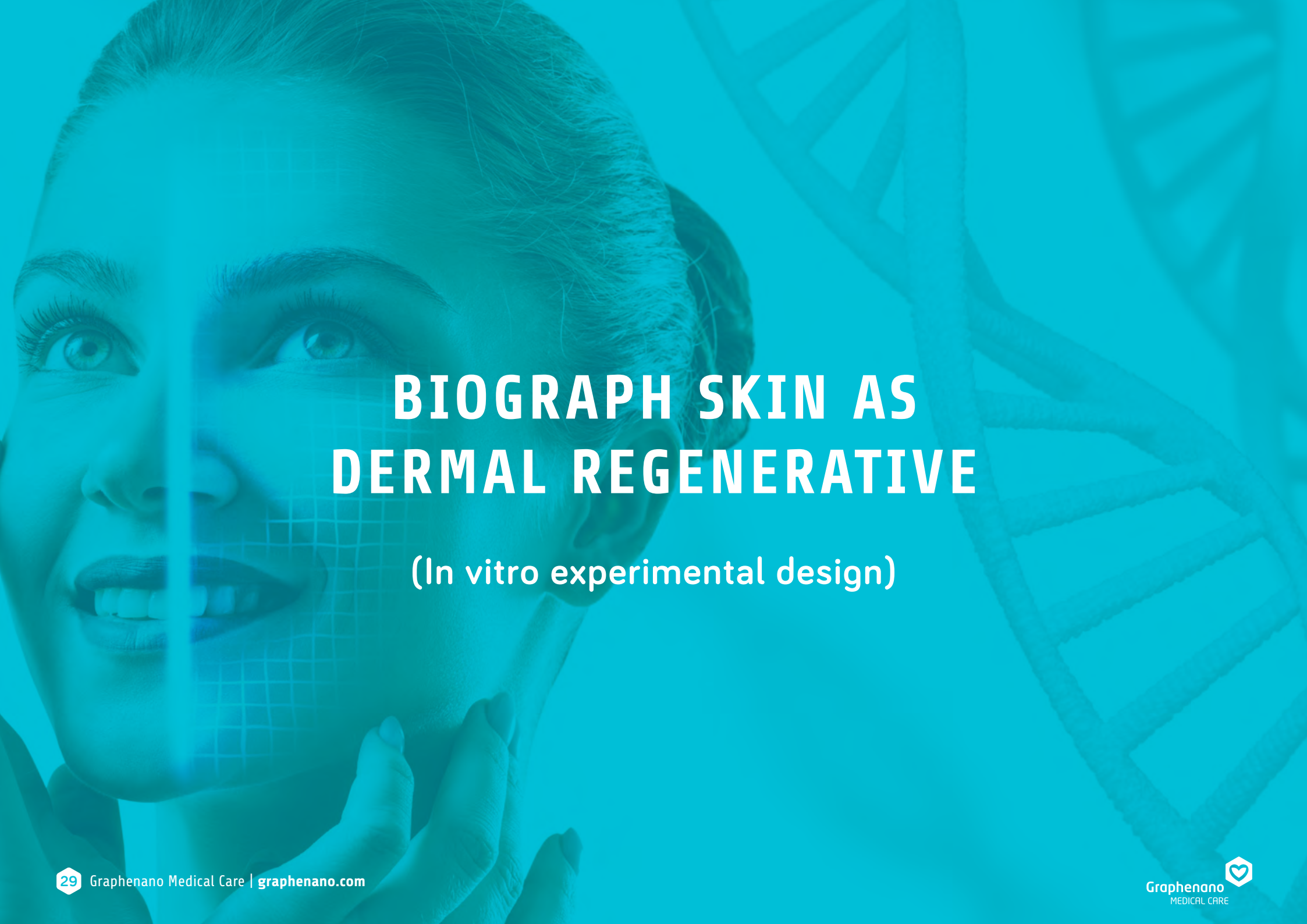


BIOGRAPH[®]-SLIM AS FAT ENTEROSORBENT AND ANTI-OBESITY AGENT

Verified efficacy.

Further research and tests shall still be carried on.

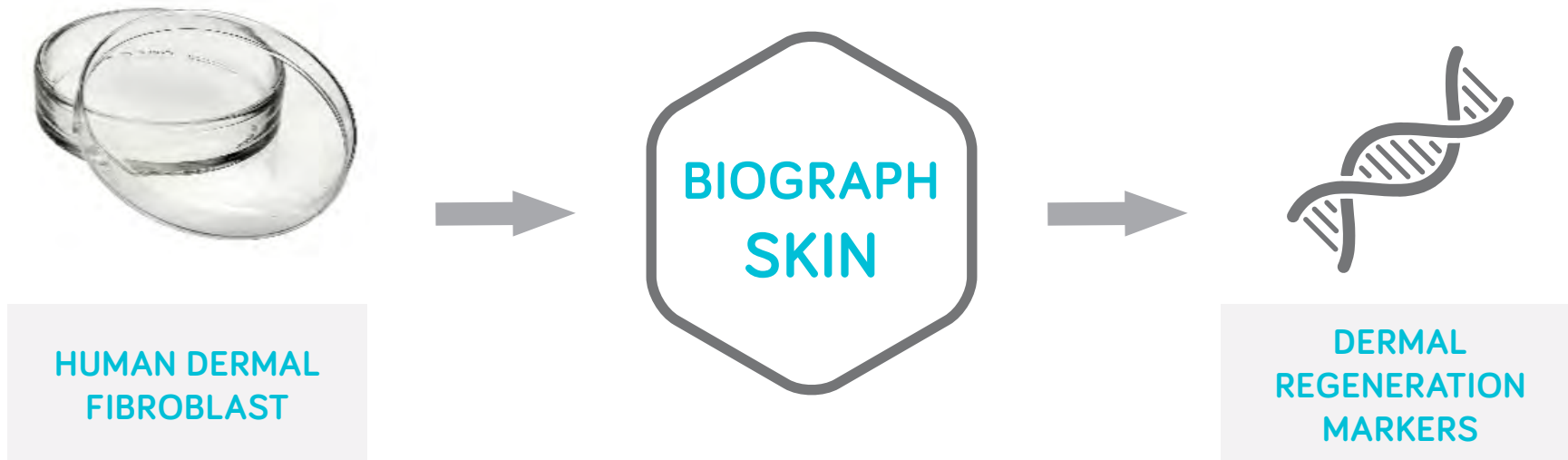
Preparation of the registration dossier will take time and registration by the health authorities is a long process and Will depend on final producto cathegory (foos supplement, Food for Special Medical Purpose,...



BIOGRAPH SKIN AS DERMAL REGENERATIVE

(In vitro experimental design)

BIOGRAPH[®] SKIN AS DERMAL REGENERATIVE (IN VITRO EXPERIMENTAL DESIGN)



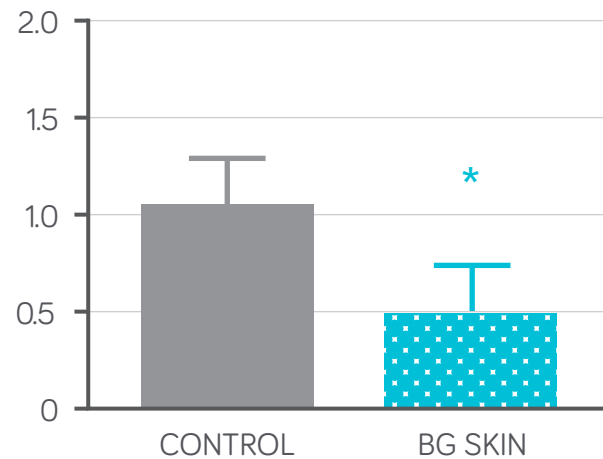
Further research and tests shall still be carried on.

Preparation of the registration dossier will take time and registration by the local health authorities is a long process due to the fact that it will be a prescription product.

BIOGRAPH SKIN FACILITATES REGENERATION CAPACITY OF DERMAL FIBROBLASTS IN VITRO

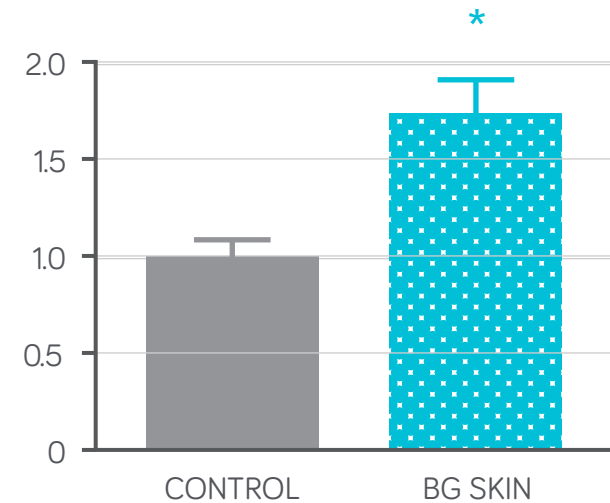
PRO-INFLAMMATION MARKER

TGF-BETA1 mRNA EXPRESSION FOLD CHANGE (VS CONTROL)

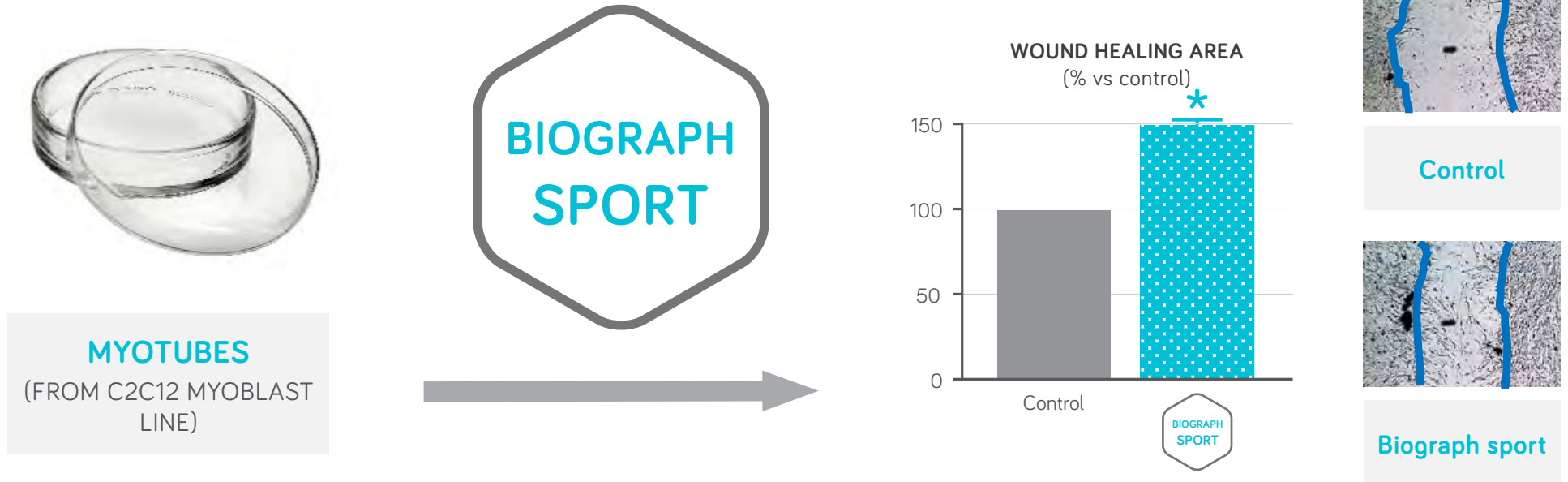


PRO-FIBROTIC MARKER

FIBRONECTIN mRNA EXPRESSION FOLD CHANGE (VS CONTROL)



BIOGRAPH[®] SPORTS AS MUSCULAR REGENERATIVE



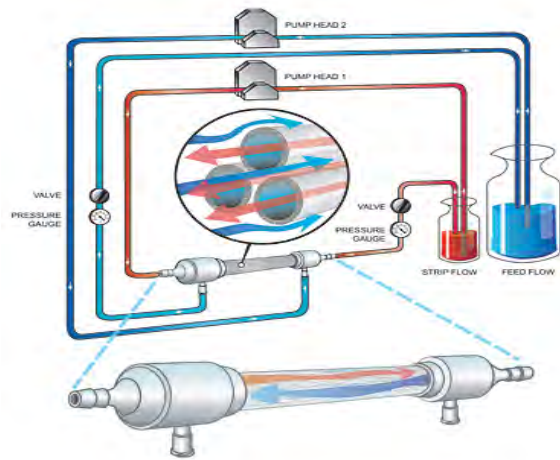
Further research and tests shall still be carried on.

Preparation of the registration dossier will take time and registration by the local health authorities is a long process due to the fact that it will be a prescription product.



RENAL AND HEPATIC HIGH PREVALENCE DISEASES

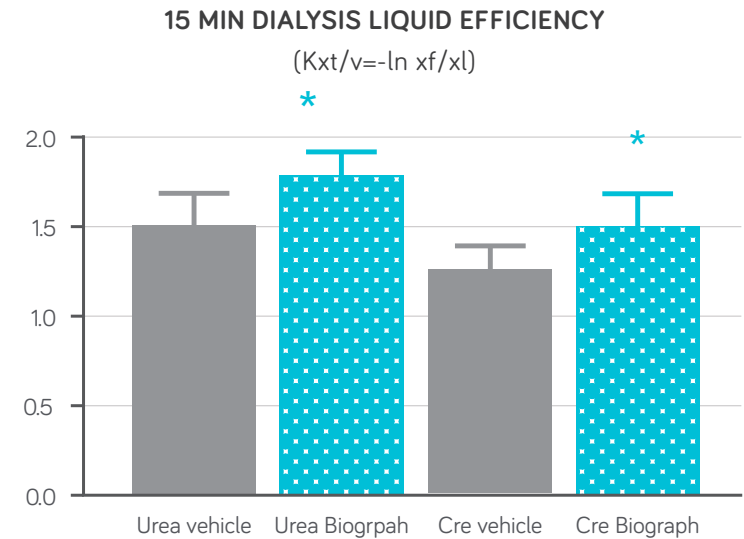
RENAL AND HEPATIC HIGH PREVALENCE DISEASES



BIOGRAPH
1



BIOGRAPH® IN THE DIALYSIS LIQUID
INCREASES THE DIALYSIS EFFICIENCY



Further research and tests shall still be carried on.

Preparation of the registration dossier will take time and registration by the local health authorities is a long process due to the fact that it will be a prescription product.

NEW GRAPHENE-BASED STRATEGIES IN THE DIALYSIS FIELD

Verified efficacy.

Further research and tests shall still be carried on.

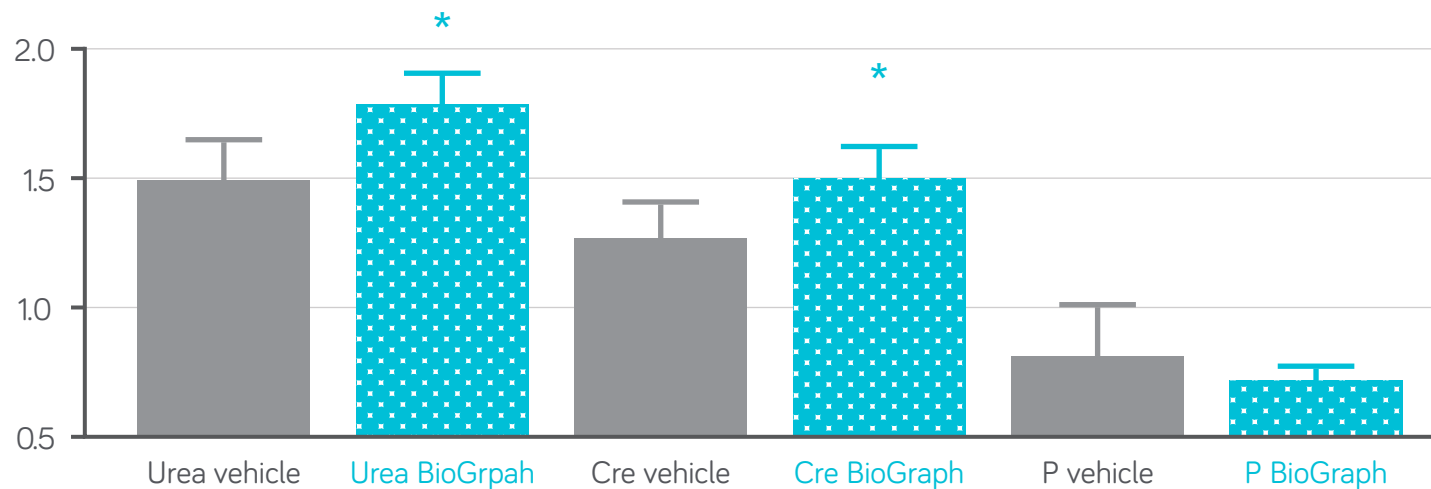
Preparation of the registration dossier will take time and registration by the health authorities is a long process and Will depend on final producto cathegory (foos supplement, Food for Special Medical Purpose,...

BIOGRAPH-1

IN THE DIALYSIS LIQUID INCREASES THE DIALYSIS EFFICIENCY

DIALYSIS EFFICIENCY

Blood-like serums were formulated with renal toxins (300 mg/dl urea, 10 mg/dl Cre and 6 mg/ml P). After 15 minutes of dialysis through a commercial dialyzer using the dialysis liquid formulated without (vehicle) or with the product, the dialysis efficiency was determined ($K_{xt}/v = -\ln(x_f/x_l)$). The values are represented as mean \pm SEM. * = $P < 0.05$ vs. control, value considered statistically significant.

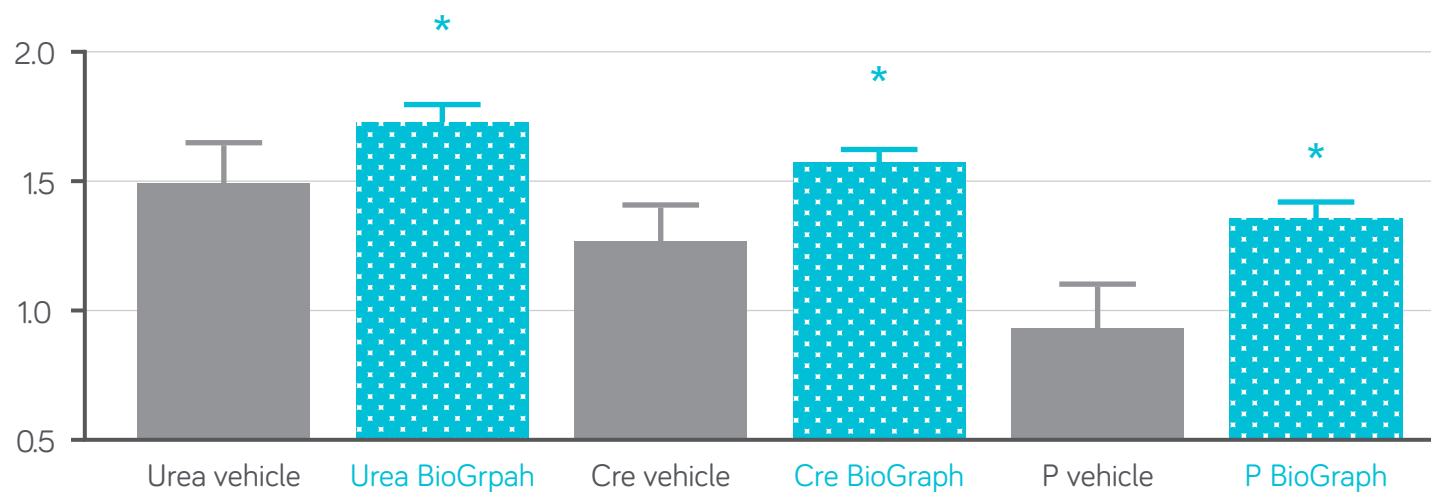


BIOGRAPH-4

IN THE DIALYSIS LIQUID INCREASES THE DIALYSIS EFFICIENCY

DIALYSIS EFFICIENCY

Blood-like serums were formulated with renal toxins (300 mg/dl urea, 10 mg/dl Cre and 6 mg/ml P). After 15 minutes of dialysis through a commercial dialyzer using the dialysis liquid formulated without (vehicle) or with the product, the dialysis efficiency was determined ($K_{xt}/v = -\ln(x_f/x_l)$). The values are represented as mean \pm SEM. * = $P < 0.05$ vs. control, value considered statistically significant.





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