

beauty science innovation

# The Science behind

# CHAC technology CELLBCOSTER®





# **ABOUT SUISSELLE**





# **SUISSELLE: A Science-Driven Swiss Company**

Founded in **2010** 



### MASTERED In-house Production with 2 clean rooms

CE-marked portfolio of dermal Fillers and Injectable Boosters

Suisselle's originality & uniqueness =

# THE PATENTED<sup>1</sup> CHAC TECHNOLOGY



Highest PURITY & QUALITY of selected HA, amino acids, vitamins and nutrients Highest QUALITY STANDARDS of R&D and manufacturing<sup>2</sup> 100% PURE ACTIVE COMPLEXES to match the skin's innate physiology





# **SUISSELLE: Driven by 3 Main Core Values**

## INNOVATION



Our R&D department is fully dedicated to developing new technologies (ex. with the CHAC technology) **to design innovative and cutting-edge aesthetic solutions** 

## EXCELLENCE



**QUALITY, SAFETY & EFFICACY** guide our product development process.

=> SUISSELLE's products are designed with the patients' safety and skin health in mind and made in accordance with the highest quality standards of cosmetics and medical device manufacturing<sup>1</sup>

## **CUSTOMER FOCUS**



**Practitioners & patients SATISFACTION** is our major goal in their strive to perfection

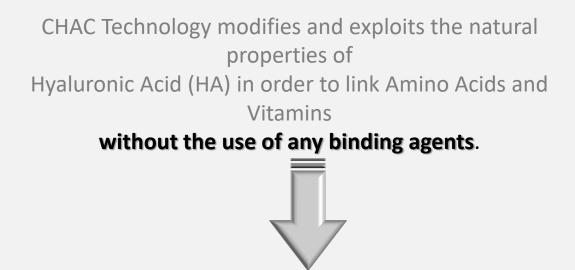


# **ABOUT CHAC TECHNOLOGY**

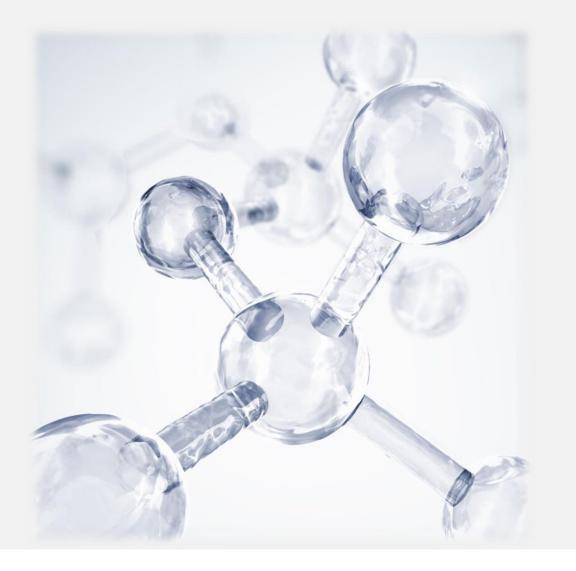




# THE PATENTED CHAC TECHNOLOGY<sup>1</sup> in a few words



This **HA** – Vitamins - Amino Acid stabilized complex is then an optimal vehicle for transporting these essential nutrients to the skin.

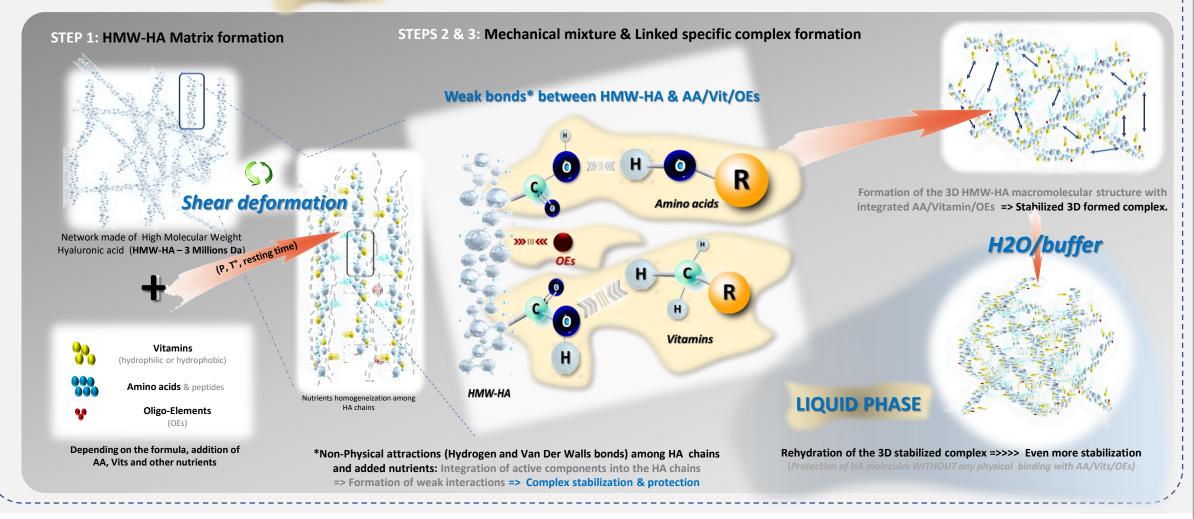


1. Swiss patent N°715653.



# THE PATENTED CHAC TECHNOLOGY in details

2 major steps in SOLID PHASE to form HMW-HA/AA/Vit macromolecular complexes<sup>1-3</sup>



1. Swiss patent N°715653. 2. Combining hyaluronic acid and mesotherapy to boost results. Prime. January/February 2017: 70-71. 3. Suisselle Internal data. Evaluation of the content uniformity of the components of Suisselle Test articles. Evaluation of Suisselle products Aluron Biopharma, Inc, Montreal, Quebec. 2014.



#### THE PATENTED CHAC TECHNOLOGY: a comparison with what is evident to all of us



As in our solar system in which there are non-physical interactions between the Earth & the Moon (or the Sun & the Earth) which attract and protect themselves for millions of even billions years,

CHAC technology creates interactions between the HMW-HA and nutrients => Stabilization & Protection for more benefits



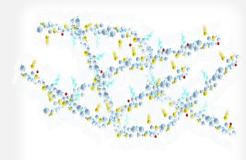
# Advantages of the CHAC TECHNOLOGY<sup>1-3</sup>

3 main advantages are carried by the supramolecular complexes formed by HMW-HA together with AA/VIT/OEs





✓ Intrinsic structural and biological benefits for the (ageing) skin compared with LMW-HA.



Supramolecular complex formed in SOLID phase



 $\checkmark$  Uniform distribution of AA, vitamins and nutrients within the complex,

✓ Integration of **both HYDROPHILIC & HYDROPHOBIC** (vitamins for instance),

✓ No excess of added ingredients (optimal dosing for the skin).



Supramolecular complex formed in LIQUID phase



 $\checkmark$  Stabilized complex => slow, gradual and optimal release for active ingredients into the skin.

1. Swiss patent N°715653. 2. Combining hyaluronic acid and mesotherapy to boost results. Prime. January/February 2017: 70-71. 3. Suisselle Internal data. Evaluation of the content uniformity of the components of Suisselle Test articles. Evaluation of Suisselle products Aluron Biopharma, Inc, Montreal, Quebec. 2014.



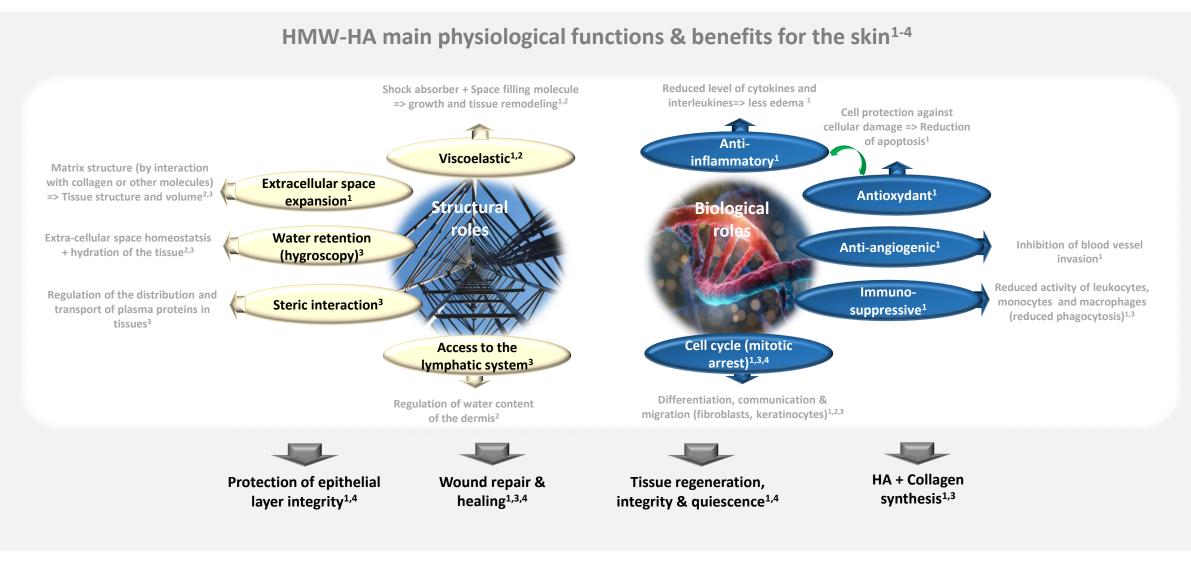
# ABOUT THE BENEFITS OF THE CHAC

The technology by itself





# Advantages of the CHAC TECHNOLOGY: covering the (aged) skin needs

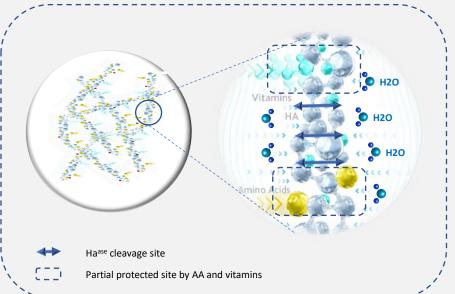


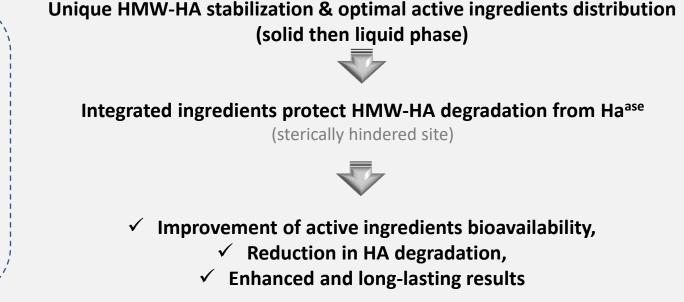
1. Mendoza G et al. Mini-Reviews in Medicinal Chemistry. 2009; 9: 1479-88. 2. Anderegg U et al. Experimental Dermatology. 2014; 23; 295-303. 3. Laurent TC & Fraser RE. FASEB Journal. 1992; 6: 2397-404. 4. Stern R et al. European Journal of Cell Biology. 2006; 85: 699-715.



# Advantages of the CHAC TECHNOLOGY: covering the aged skin needs

BENEFITS of the CHAC TECHNOLOGY for the SKIN: an improvement of natural HMW-HA properties: a summary<sup>1,2</sup>





« CELLBOOSTER<sup>®</sup> complexes have the unique benefits of an optimal skin transporting vehicle (stabilized HMW-HA) with essential nutrients effective delivery for noticeable longer-lasting results »



# CELLBOOSTER<sup>®</sup> advantages and benefits for your patients





### Just one thing to know & to recall: CELLBOOSTER<sup>®</sup> are made for everyone depending on their skin needs

**CELLBOOSTER®** products benefit everybody whatever their age: ameliorate skin health and state depending on patient needs

Our skin is the most relevant sign of our health and well being



However, with our current lifestyle & as we are aging day after day



Our skin undergoes major changes at every step of our life (starting from mid 20s'-30s')

Sun exposure, Unhealthy diet, Alcohol & smoke, Pollutants, Medicine/drugs, Stress,

And many other factors...



With 4 specific & well thought formula, potentialized with the CHAC technology, CELLBOOSTER® products are the ANSWER to their needs

Any issue that the patients can meet and have (i.e., wrinkles, dehydration, fat deposits, hyperpigmentation & hair loss)





### CHAC technology CELLBCOSTER®



 ✓ Skin redensification
✓ Lifted and smoothed wrinkles
✓ Improved skin tone & microcirculation



GLOW

✓ Protected skin against environment aggressions



**SHAPE** 

✓ Local fat & double chin reduced
✓ Liquid retention decreased
✓ Lymphatic drainage



✓ Hair growth acceleration
✓ Scalp nourishment
& fortified follicles
✓ Hair loss and graying prevention



# What kind of products are CELLBOOSTER<sup>®</sup>?

**CELLBOOSTER® = THE NEW GENERATION OF SKIN BOOSTERS: a summary** 

- Medical Device Class III
- CE mark
- SWISS MADE
- INJECTABLE STABILIZED BOOSTER COMPLEXES (HA – AA/Vitamins/Oligo-elements)
- Born from the PATENTED CHAC TECHNOLOGY





# CHAC technology

### **INDICATIONS:**

- Moderate skin depression, loss of firmness or laxity (facial tissue & contours),
- Fine lines & wrinkles,
- Atrophic scars, post acne, striae,
- Dehydrated skin, visible dryness,
- Loss of skin tone & microcirculation,
- Couperose.

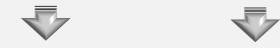
### **TREATMENT AREAS:**

Epidermis and dermis of:

- Face,
- Neck,
- Decollete area,
- Back of the hands,
- Internal face of the arms,
- Body.



In a few more details



Lifts & Smoothes Wrinkles

✓ Skin Redensification

✓ Skin Tone & Microcirculation Improvement

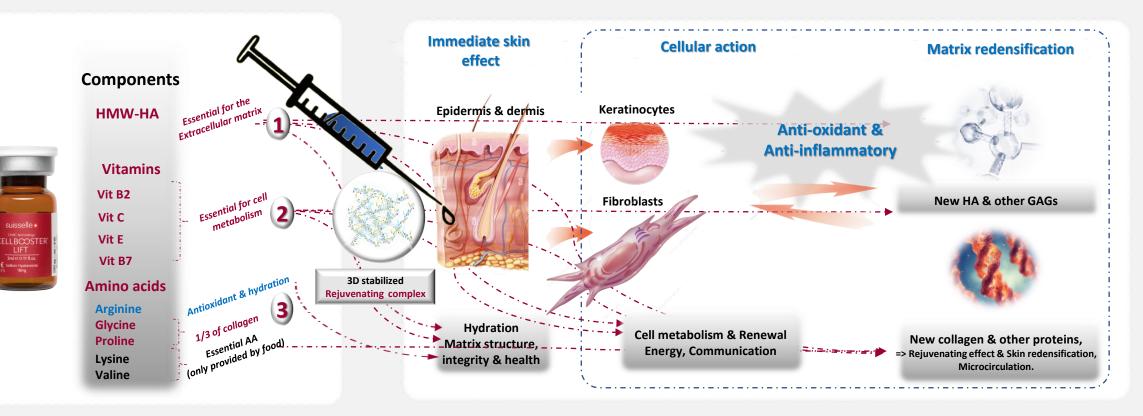


lslobal benefits on skin health

# LIFT 🚦 & skin rejuvenation

#### HMW-HA together with AA and vitamins to afford benefits to the skin from the inside

working together to rejuvenate derm cells metabolism and extracellular matrix<sup>1-12</sup>



### CELLBCOSTER® LIFT Working the skin from its inside cells & matrix to get a full rejuvenating cure and care

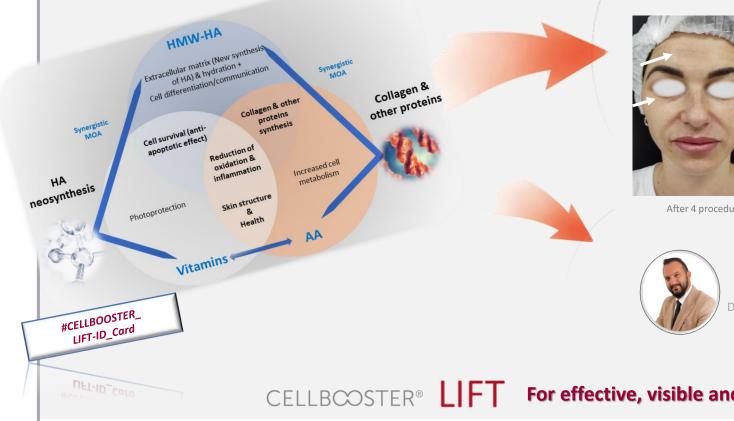
1. Hou Y & Wu G. Adv Nutr 2018;9:849–851. 2. Amirrah IN *et al.* Biomedicines. 2022; 10: 2307. 3. Murakami H *et al.* Amino Acids. 2012; 42: 2481-9. 4. Arginine at a glance. Available at the address: <a href="https://www.paulaschoice.fr/fr/arginine/ingredient-arginine.html">https://www.paulaschoice.fr/fr/arginine/ingredient-arginine.html</a>. What Amino Acids are in Collagen? Is the profile unique?. Available at the address: <a href="https://www.paulaschoice.fr/fr/arginine/ingredient-arginine.html">https://www.paulaschoice.fr/fr/arginine/ingredient-arginine.html</a>. What Amino Acids are in Collagen? Is the profile unique?. Available at the address: <a href="https://www.simplysupplements.co.uk/healthylife/health-and-beauty/vitamin-b-for-skin">https://www.simplysupplements.co.uk/healthylife/health-and-beauty/vitamin-b-for-skin</a>. 7. Telang PS. Indian Dermatology Online Journal. 2013; 4 (2): 143-6. 8. Monjotin N & Tenca G. Microvascular research. 2022; 139: 104274. 9. Pinnell SR. The Yale Journal of Biology and Medicine. 1985; 58: 553-9. 10. Murad S *et al.* PNAS. 1981; 78(5): 2879-82. 11. Dikici S. GU J Sci. 2023. 12. Keen MA. Indian Dermatology Online Journal. 2016: 311-5.



### Synergistic action of stabilized active components

#### HMW-HA together with AA and vitamins to afford benefits to the skin from the inside

working together to rejuvenate derm cells metabolism and extracellular matrix<sup>1-12</sup>



#### Wrinkles & skin tone



After 4 procedures with 2-3 weeks intervals





DR. NATALIA MIKHAYLOVA, MD, PhD Dermatologist, Aesthetic Physician Switzerland

- 1

#### **Acne scars**



2 subcutaneous and 2 intradermal injections

#### CELLBCOSTER<sup>®</sup> LIFT For effective, visible and long-lasting results

1. Hou Y & Wu G. Adv Nutr 2018;9:849-851. 2. Amirrah IN et al. Biomedicines. 2022; 10: 2307. 3. Murakami H et al. Amino Acids. 2012; 42: 2481-9. 4. Arginine at a glance. Available at the address: https://www.paulaschoice.fr/fr/arginine/ingredient-arginine.html.5. What Amino Acids are in Collagen? Is the profile unique?. Available at the address: https://cbsupplements.com/cc/collagen-amino-acids-profile/. 6. How Vitamin B Can Help Support Healthy Skin. Available at the address: https://www.simplysupplements.co.uk/healthylife/health-and-beauty/vitamin-b-for-skin. 7. Telang PS. Indian Dermatology Online Journal. 2013; 4 (2): 143-6. 8. Monjotin N & Tenca G. Microvascular research. 2022; 139: 104274. 9. Pinnell SR. The Yale Journal of Biology and Medicine. 1985; 58: 553-9. 10. Murad S et al. PNAS. 1981; 78(5): 2879-82. 11. Dikici S. GU J Sci. 2023. 12. Keen MA. Indian Dermatology Online Journal. 2016: 311-5.



# CHAC technology CELLBCOSTER® GLOW

## **INDICATIONS:**

- Hyperpigmentation,
- Incipient Aging (fine lines and wrinkles),
- Dry skin,
- Sun-damaged and environmentally compromised skin,
- Uneven skin tone.

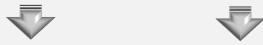
### **TREATMENT AREAS:**

Epidermis and dermis of:

- Face,
- Neck,
- Decollete area,
- Back of the hands,
- Internal face of the arms,
- Body.



In a few more details



Improves skin tone,

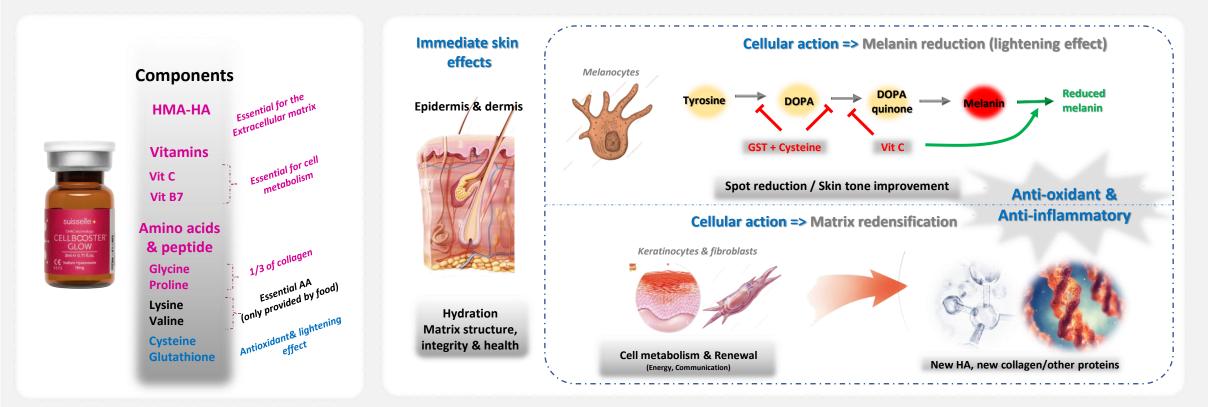
- Reduces hyperpigmentation,
- Deeply hydrates the skin



#### HMW-HA, L-Cysteine, Glutathione and Vitamin C

(skin hyperpigmentation &

working together to improve Skin tone and reduces its hyperpigmentation<sup>1-14</sup>



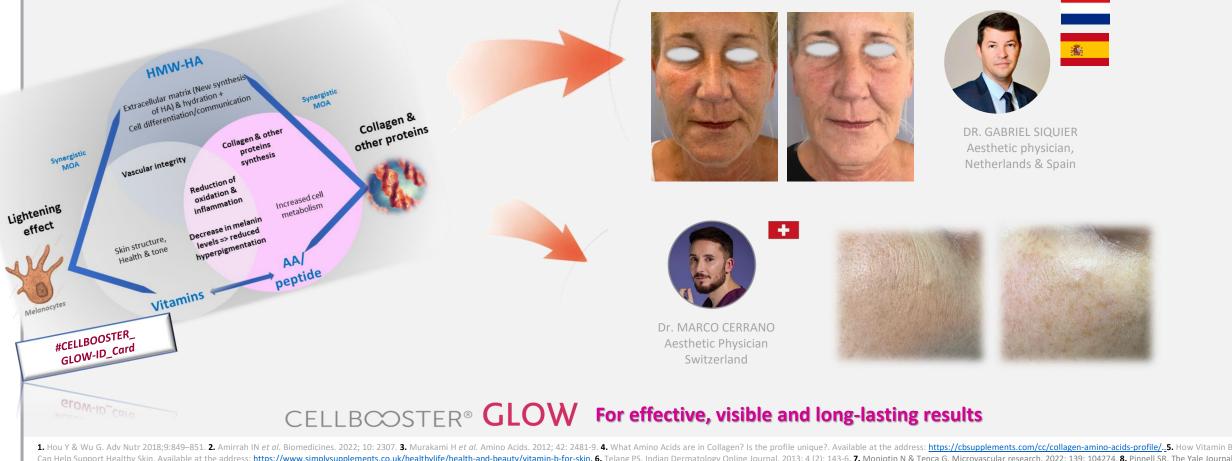
### CELLBCOSTER® GLOW Reduces hyperpigmentation while hydrating/nourishing & revitalizing the skin

1. Hou Y & Wu G. Adv Nutr 2018;9:849–851. 2. Amirrah IN *et al.* Biomedicines. 2022; 10: 2307. 3. Murakami H *et al.* Amino Acids. 2012; 42: 2481-9. 4. What Amino Acids are in Collagen? Is the profile unique?. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen?</a> Is defined to a supple to a supplements.com/cc/collagen?</a> Is defined to a supplements.com



#### HMW-HA, L-Cysteine, Glutathione and Vitamin C

working together to improve skin tone and reduces its hyperpigmentation<sup>1-14</sup>



Can Help Support Healthy Skin. Available at the address: https://www.simplysupplements.co.uk/healthylife/health-and-beauty/vitamin-b-for-skin. 6. Telang PS. Indian Dermatology Online Journal. 2013; 4 (2): 143-6. 7. Monjotin N & Tenca G. Microsocular research. 2022; 139: 104274. 8. Pinnell SR. The Yale Journal of Biology and Medicine. 1985; 58: 553-9. 9. Murad S et al. PNAS. 1981; 78(5): 2879-82. 10. Dikici S. GU J Sci. 2023. 11. Taira N et al. Int J Mol Sci. 2018; 19: 1144. 12. Gandhi G et al. Pigment Int. 2021; 8: 144-52. 13. Malathi M & Thappa DM Indian Journal of Dermatology and Leprology. 2013; 79(6): 842-6. 14. Ando H et al. Journal of Investigate Dermatology. 2007; 127: 751-61.



# CHAC technology SHAPE

## **INDICATIONS:**

- Local fat accumulation,
- Sagging skin,
- Double chin,
- Fat cheeks,
- Eye bags,
- Water retention,
- Puffiness, edema,
- Cellulite.

## **TREATMENT AREAS:**

- Subcutaneous layers of (also dermis):
- \_\_\_\_
- Face,
- Neck,
- Décolleté area,
- Back of the hands,
- Internal face of the arms,
- Body.



In a few more details

CHAC technology



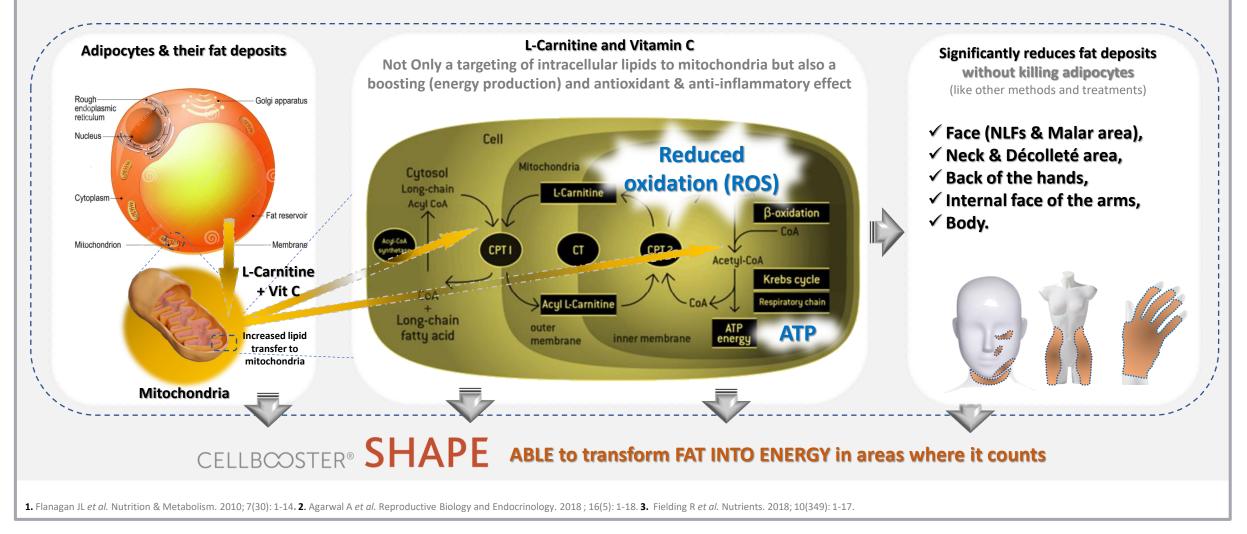


(fat deposit reduction)

# **SHAPE SHAPE SHAPE**

L-Carnitine, together with Vitamin C will allow a physiological reduction in fat deposits in adipocytes,

working by "eating" the fat to transform it in proper energy (ATP) for the cells<sup>1-3</sup>

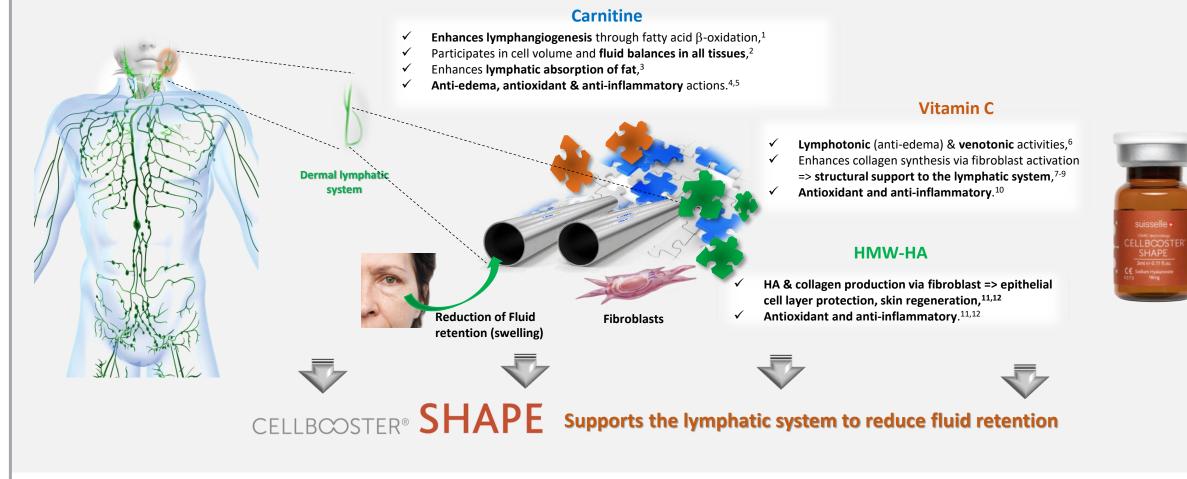




(lymphatic drainage)

# SHAPE 🖥 & lymphatic drainage

HMW-HA together with Carnitine and vitamin C help lymphatic drainage and fight fluid retention



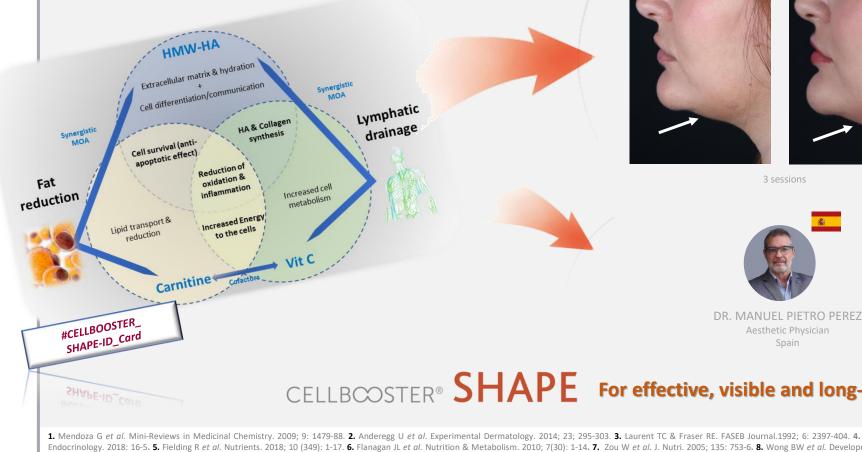
1. Wong BW *et al.* Nature. 2017; 542(7639): 49-54. 2. Flanagan JL *et al.* Nutrition & Metabolism. 2010; 7: 30. 3. Calikoglu C *et al.* Acta Medica Mediterranea. 2015; 31: 741.4. Zou W *et al.* J. Nutr. 2005; 135: 753-6. 5. Fielding R *et al.* Nutrients; 2018; 10: 349. 6. Monjotin N & Tenca G. Microvascular Research. 2022; 139: 104274. 7. Dikici S. Gu J Sci. 2023. 8. Murad S *et al.* PNAS. 1981; 78(5): 2879-82. 9. https://healthyeating.sfgate.com/benefits-vitamin-c-lymphatic-tissue-10388.html. 10. Telang PS. Indian Dermatology Online Journal. 2013; 4(2): 143-6. 11. Anderegg U *et al.* Experimental Dermatology. 2014; 23: 295-303. 12. Mendoza G *et al.* Mini-Review in Medicinal Medicine. 2009; 9: 1479-88.



# **SHAPE** Synergistic action of HMW-HA with Carnitine/Vit C

#### HMW-HA, L-Carnitine and Vitamin C work together

To improve lipid reduction, lymphatic drainage – a boost of subcutaneous cells & system<sup>1-14</sup>



#### **Fat reduction**





DR. MARCO CERRANO MD, Aesthetic Physician Switzerland

#### Lymphatic drainage





1 session / 1 vial + After 15 day - Apriline<sup>®</sup> NORMAL: 1 session / 1

### CELLBCOSTER® SHAPE For effective, visible and long-lasting results

1. Mendoza G et al. Mini-Reviews in Medicinal Chemistry. 2009; 9: 1479-88. 2. Anderegg U et al. Experimental Dermatology. 2014; 23; 295-303. 3. Laurent TC & Fraser RE. FASEB Journal. 1992; 6: 2397-404. 4. Stern R et al. European Journal of Cell Biology. 2006; 85: 699-715.4. Agarwal A et al. Biology and Endocrinology. 2018: 16-5. 5. Fielding R et al. Nutrients. 2018; 10 (349): 1-17. 6. Flanagan JL et al. Nutriion & Metabolism. 2010; 7(30): 1-14. 7. Zou W et al. J. Nutri. 2005; 135: 753-6. 8. Wong BW et al. Developmental cell. 2018; 45: 289-301. 9. Alhasaniah AH et al. Saudi Journal of Biological Science. 2023; 30: 103555. 10. What is the best vitamin for the lymphatic system? Available at the address: https://www.calendar-canada.ca/fag/what-is-the-best-vitamin-for-the-lymphatic-system. 11. Monjotin N & Tenca G. Microvascular research. 2022; 139: 104274. 12. Pinnell SR. The Yale Journal of Biology and Medicine. 1985; 58: 553-9. 13. Murad S et al. PNAS. 1981; 78(5): 2879-82. 14. Dikici S. GU J Sci. 2023.



# CHAC technology HAAIR®

## **INDICATIONS:**

- Non cicatricial alopecia,
- Alopecia areata,
- Androgenic alopecia,
- Damaged hair shaft (brittle, dull color, split ends),
- Premature graying,
- Seborrhea, psoriasis.

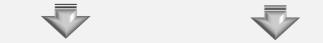
## **TREATMENT AREAS:**

Epidermis and dermis of:

- The scalp (near hair roots according to the mesotherapy applied technique).

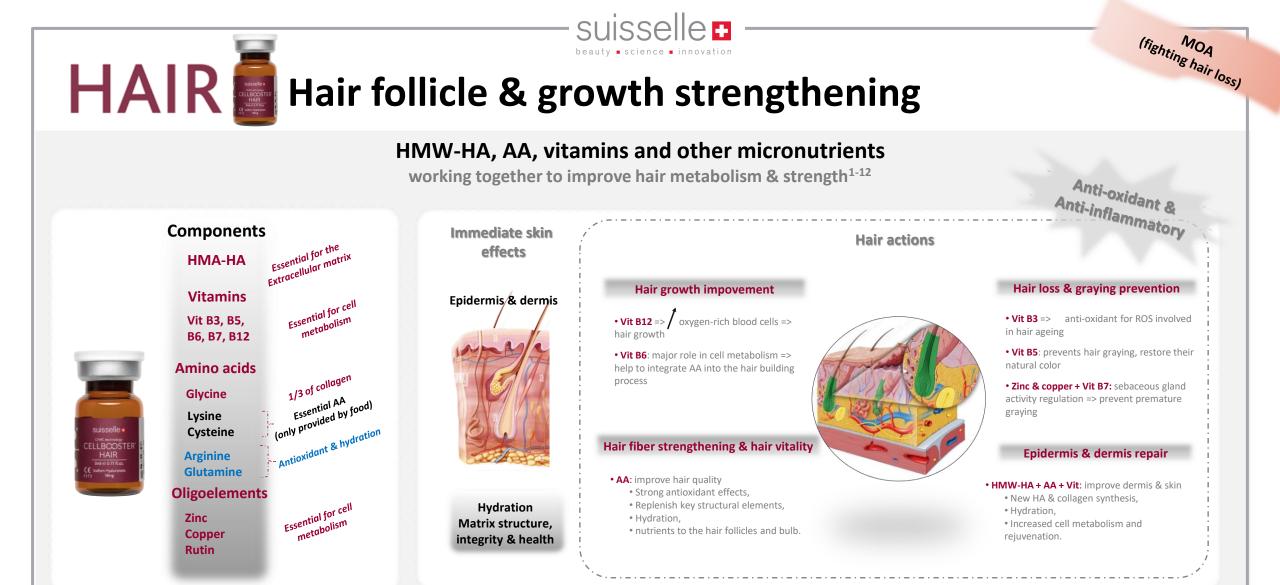


In a few more details



✓ Nourishes the scalp and fortifies follicles,

- ✓ Accelerates hair growth,
- ✓ Prevents hair loss and graying.



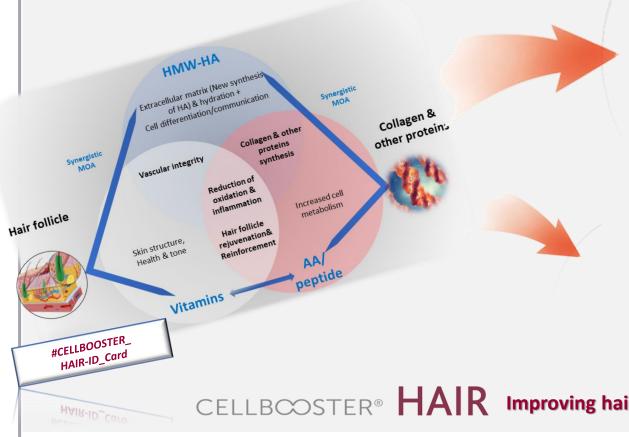
## CELLBCOSTER® HAIR Improving hair follicle metabolism and strength on the long run

1. Hou Y & Wu G. Adv Nutr 2018;9:849–851. 2. Amirrah IN *et al.* Biomedicines. 2022; 10: 2307. 3. Murakami H *et al.* Amino Acids. 2012; 42: 2481-9. 4. What Amino Acids are in Collagen? Is the profile unique?. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. Bealty M *et al.* Journal of Dermatological Treatment. 2010: 1-10. 7. Choi SJ *et al.* International Journal of Molecular Medicine. 2016; 38: 357-63. 8. Rajput R. J Nutrition Supplement and Effective Management. 2018; 6(3): 1-11. 9. Almohanna HM *et al.* Dermatol Ther. 2018: 10. Bassino E *et al.* Int J Mol Sci. 2020; 523. 11. Labrozzi A. Hair Ther Transplant. 2020; 10: 1-6. 12. Liu G *et al.* Animal Nutrition. 2021: 1162-72.



#### HMW-HA, AA, vitamins and other micronutrients

working together to improve hair metabolism & strength<sup>1-12</sup>



#### Alopecia



4 sessions (3 weeks interval)



DR. MARIAM TEDIASHVILI Aesthetic physician, Georgia



DR. GABRIEL SIQUIER Aesthetic physician, Netherlands & Spain

#### Seborrheic dermatitis



# CELLBCOSTER® HAIR Improving hair follicle metabolism and strength on the long run

1. Hou Y & Wu G. Adv Nutr 2018;9:849–851. 2. Amirrah IN *et al.* Biomedicines. 2022; 10: 2307. 3. Murakami H *et al.* Amino Acids. 2012; 42: 2481-9. 4. What Amino Acids are in Collagen? Is the profile unique?. Available at the address: <a href="https://cbsupplements.com/cc/collagen-amino-acids-profile/..5">https://cbsupplements.com/cc/collagen-amino-acids-profile/..5</a>. How Vitamin B Can Help Support Healthy Skin. Available at the address: <a href="https://www.simplysupplements.co.uk/healthylife/health-and-beauty/vitamin-b-for-skin">https://www.simplysupplements.co.uk/healthylife/health-and-beauty/vitamin-b-for-skin</a>. 6. Semalty M *et al.*, Journal of Dermatological Treatment. 2010: 1-10. 7. Choi SJ *et al.* International Journal of Molecular Medicine. 2016; 38: 357-63. 8. Rajput R. J Nutrition Supplement and Effective Management. 2018; 6(3): 1-11. 9. Almohanna HM *et al.* Dermatol Ther. 2018; 10. Bassino E *et al.* Int J Mol Sci. 2020; 523. 11. Labrozzi A. Hair Ther Transplant. 2020; 10: 1-6. 12. Liu G *et al.* Animal Nutrition. 2021: 1162-72.

# CHAC technology CELLBCOSTER®



Now that we saw the benefits of each product, let's see together how to get the best of CELLBOOSTER®



**Injection protocol & combination treatments** 

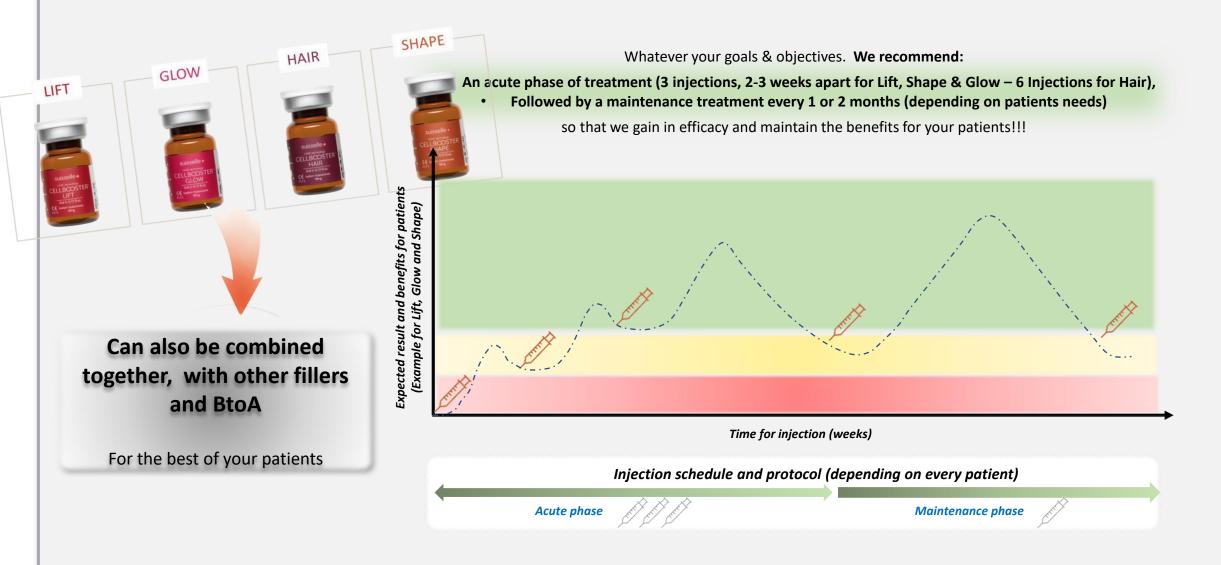
...For the best of your patients







# CELLBCOSTER<sup>®</sup> Protocol and additional benefits







# CHAC technology CELLBCOSTER®

# The NEW GENERATION OF SKIN BOOSTERS