



reveal your summer glow

healthy, youthful,
fresh-from-holiday look
all year round



We all love that natural **sun-kissed glow** that we get from a summer holiday

Naturally bronzed skin makes us feel beautiful and confident, healthier and revitalised.

But summer holidays only come around once a year, and in the meantime, everyday busy life can leave us feeling tired and our skin looking dull.

Quick-fixes, like make-up or self-tanners, are only superficial and sometimes even artificial.

How to get a natural healthy glow, all year round?

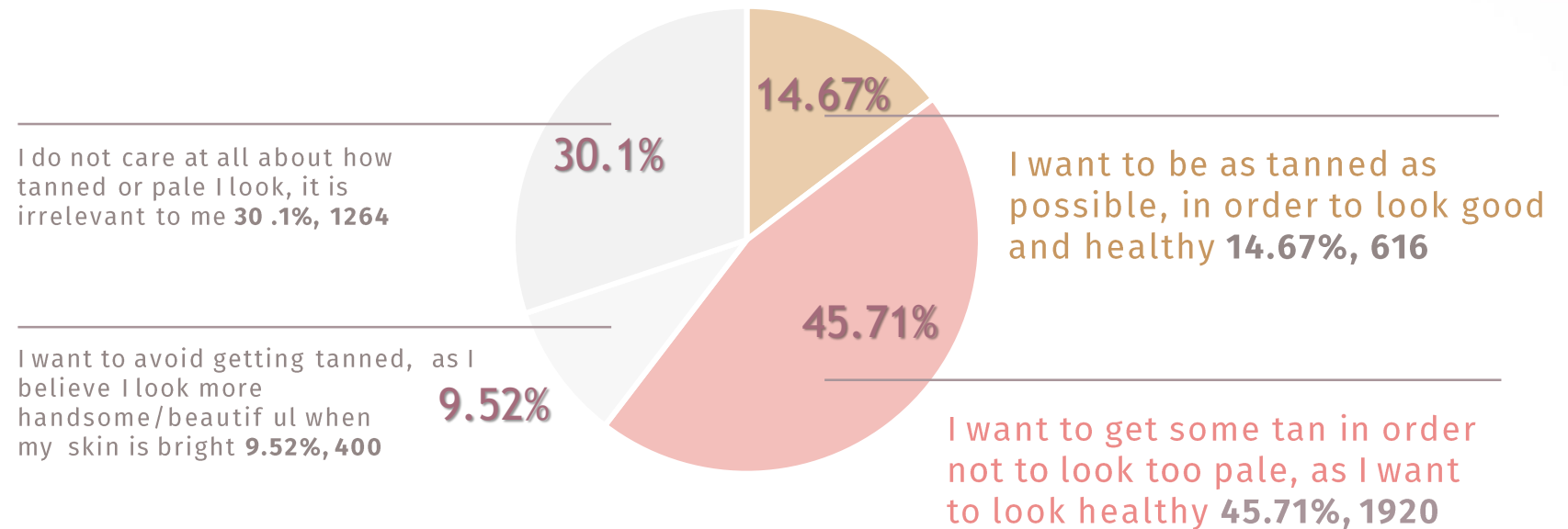


Consumers insights

Consumers value having **some tan** to look good & healthy

Beauty standards evolved towards a more natural effect, diverting from deep tanning

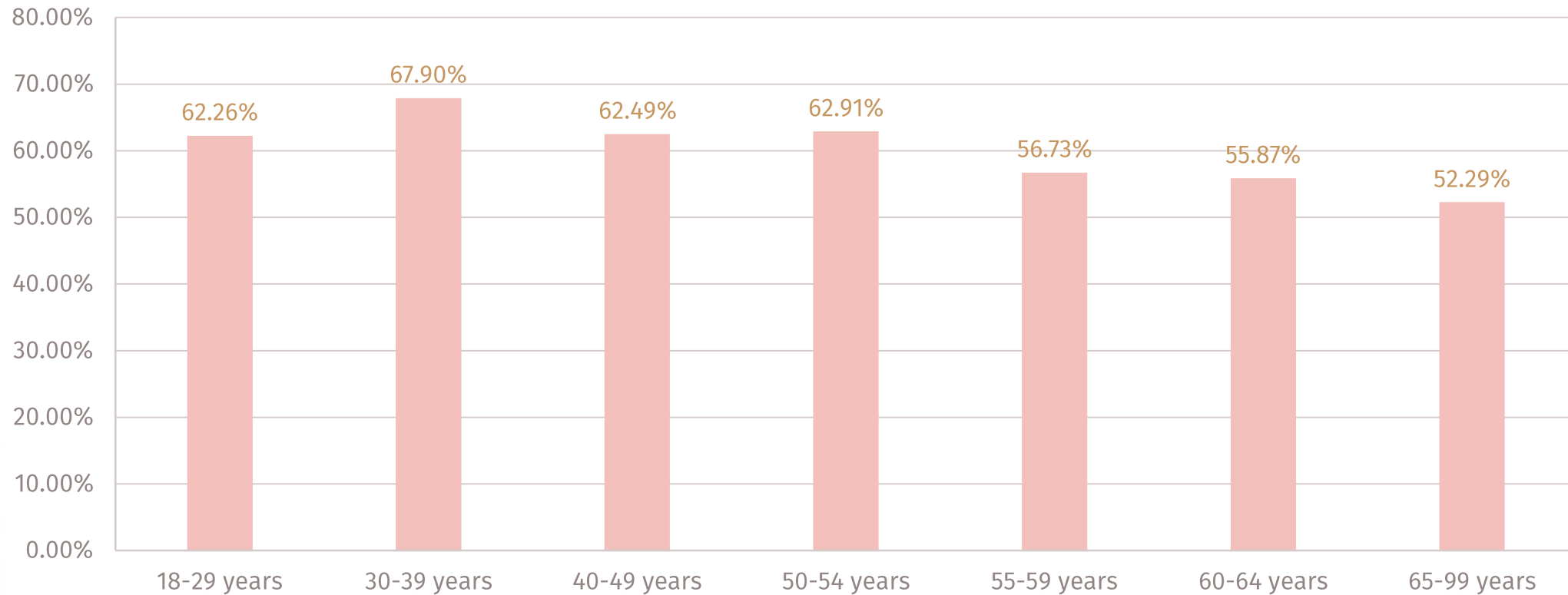
Q: Think about your skin complexion, how tanned or neutral or pale it is and its role in your grooming/ beauty habits or personal look.
What's your general attitude towards it?



...and this is true across age groups

With bigger relevance below 55 y.o.

% Consumers who want to at least “get some tan” to look healthy & good



consumer question

how does having a tan make you look & feel?

With a **just back from holiday** look, people feel...

More youthful, beautiful & confident to wear less make-up

*"I definitely think having a tan makes me feel and look **younger** and **more confident**".*

Staci, 35

*"...my preference is to have a tan, because it can affect the **evenness on my face**".*

Ashley, 30

*"I think when I'm more tanned I probably do **wear less make-up** because I feel a **bit more confident in my skin tone**".*

Kirsten, 34

*"When I've got a tan, my **skin definitely looks healthier**. It looks **younger, more even, and smoother**. Having a tan definitely makes me feel younger. I feel **more confident**, and I feel like I can go out **without wearing as much make-up, or any make-up**".*

Lucy, 31

consumer insights



consumer question:

**what does glowing skin
mean to you?**

In consumers' words...

Skin with “some tan, good colour or not pale” means... “glowing”

“For me glowing skin is skin that has a **really good pigment**, really **good light creating properties**. I wouldn't say my skin was glowing because quite pale. I think skin that has **some colour**, whether it be tan or fake tan does tend to appear more glowing”

Nicola, 33

“To me glowing skin is **synonymous with health**, the skin looks **fresh and alive**, not covered in makeup, **not pale and pallid, good colour, good tone** and not spotty.”

Stephanie, 49

“To me glowing skin means a **nice crisp, dark looking skin** that when you are out in the sun and people see you they can tell that you **have a tan**”.

Penny, 48

“I think that glowing skin means your skin has **healthy colour and shine**, and it's like free of blemishes or any other issues. It's just like sort of **looking sun-kissed but not sun damaged** I guess.”

Michelle, 29

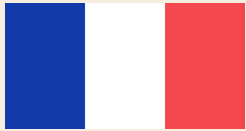


Ultimately glowing skin means **healthy looking**

Q: How would you most want your skin to look like if it is glowing?



Healthy looking - 44%
Radiant - 22%
Luminous - 12%



Radiant - 29%
Luminous - 18%
Healthy looking - 15%



Healthy looking - 33% Even skin tone - 14% Peachy - 12%

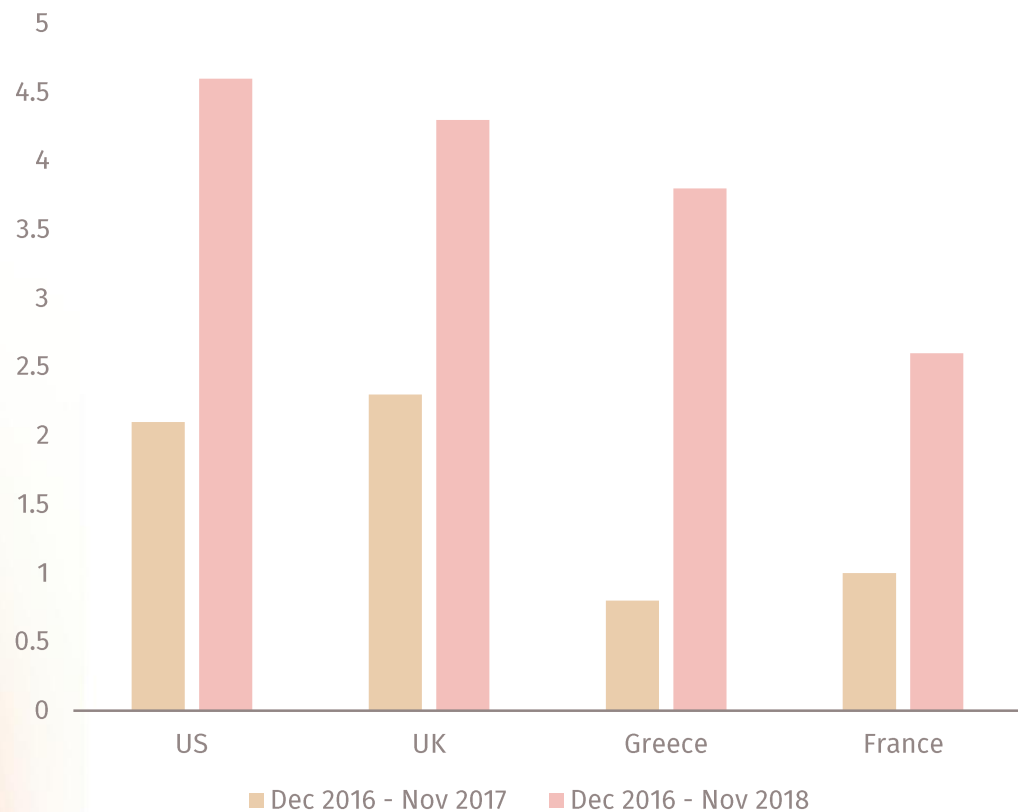


Healthy looking - 33% Peachy - 20% Brightened - 16%



“Glowing skin” is a growing trend within facial care

Leading markets: % of face/neck care launches with ‘glow’ in product name, 2017 vs 2018



#

The hashtag #glowingskin has been used over 3.5 million times in 2019



DSM proudly introduces the perfect solution
for this market context

NEW Glow-Boosting Peptide

**It works with skin to bring out its natural healthy glow
...all year round, as if you were just back from holidays!**



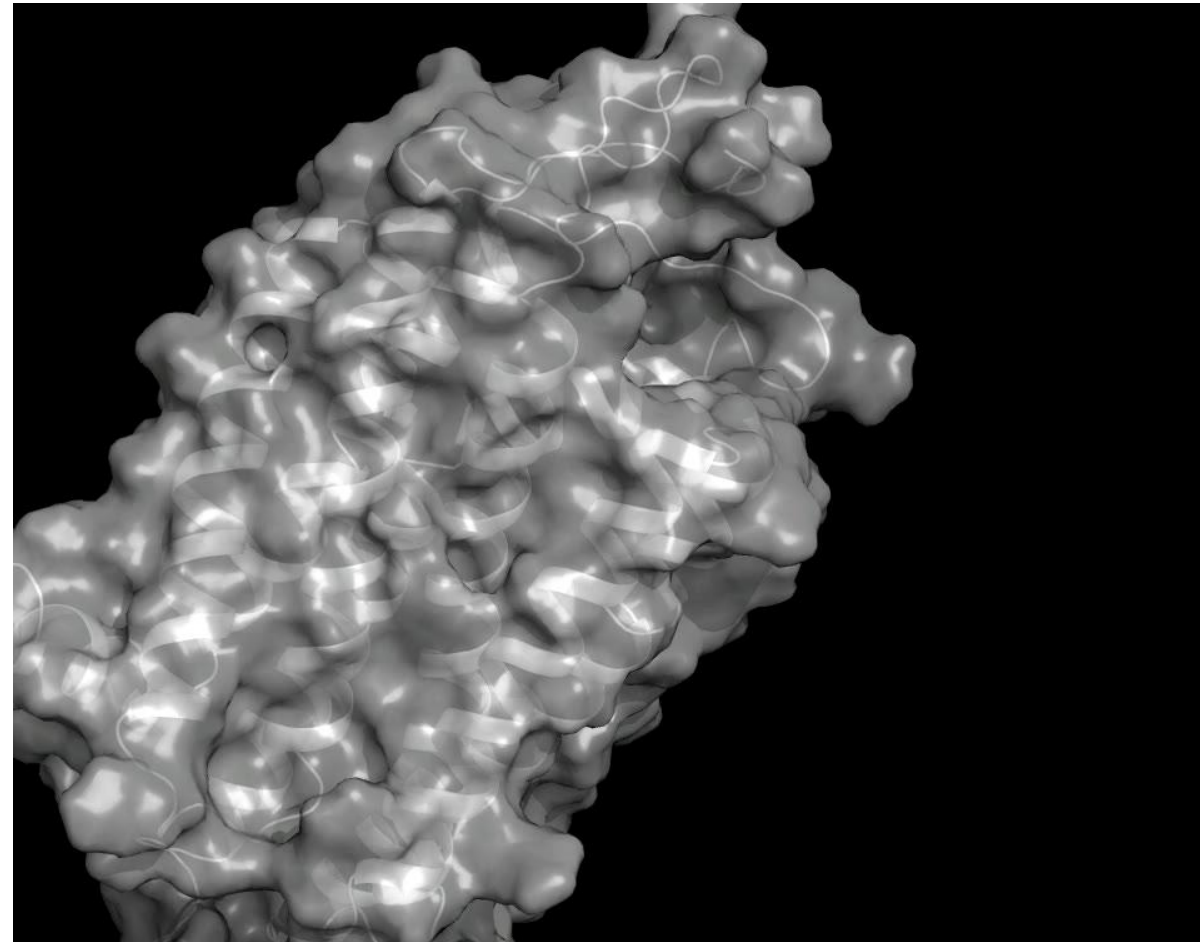
SYN-GLOW™ is a pentapeptide

Designed to highly selectively boost MC1R (or Melanocortin-1 receptor)

**MC1R is
the biochemical switch
(off/on) of the
Melanin synthesis.**

MC1R is a transmembrane protein, integrated into the cellular membrane and, in this role, it's the unique gate to biological tanning.

Melanin is the pigment that gives skin its unique sun-kissed tone.



In vitro: from a library of more than 100 peptides, SYN-GLOW™ has been identified to be the best candidate to activate MC1R. Results published in Int. J. of Molecular Sciences: <https://www.ncbi.nlm.nih.gov/pubmed/31817532>

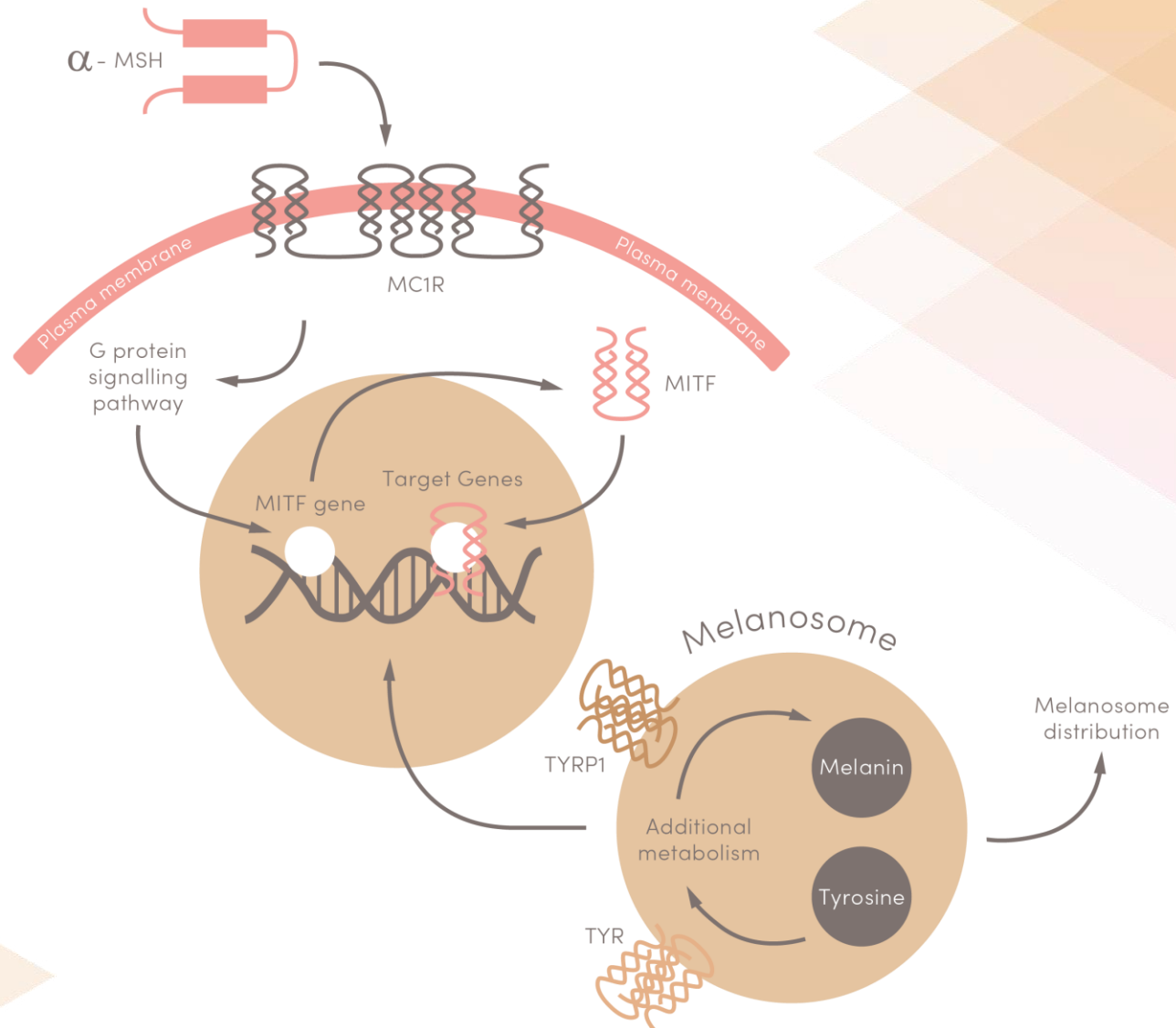
Mode of action: Mc1R activation, related to scientific evidences. This is not intended to be final product claim

Let's get to know MC1R better...

MC1R is the master regulator of skin tanning.

MC1R is a transmembrane protein so it is integrated into the cellular membrane: in this role the MC1R is the unique gate to the melanogenesis pathway.

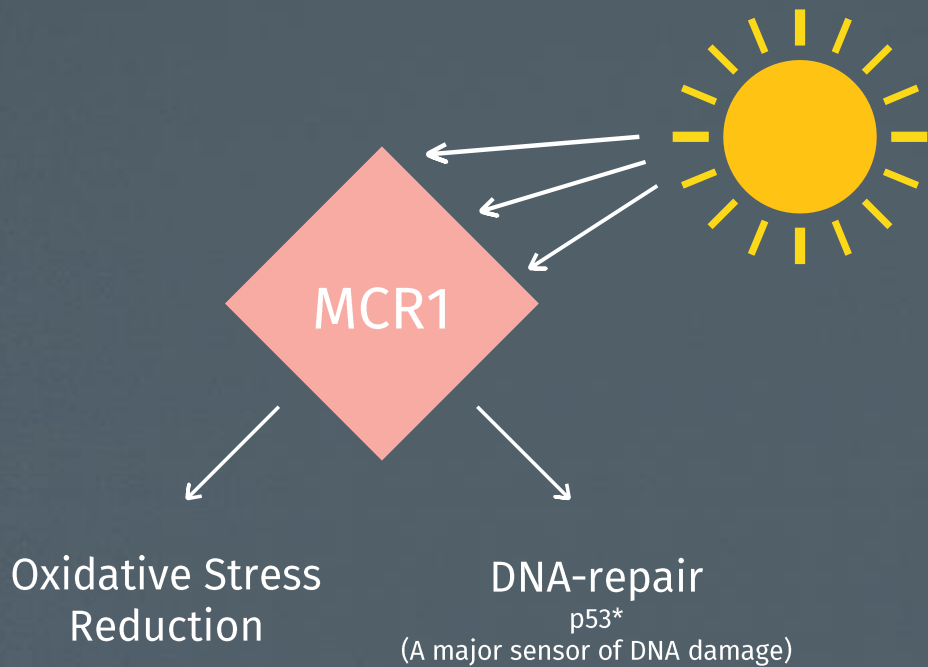
The signal to switch on is triggered by alphaMSH or by SYN-GLOW™.



MC1R = Melanocortin 1 Receptor
Alfa-MSH = peptide of 13 amino acids, the natural agonist of MC1R
MITF = Microphthalmia-associated transcription factor
TYR = Tyrosinase
TYRP1 = Tyrosinase related protein 1
G protein = GTP (Guaninotriphosphate) binding protein

Strengthening skin's defences from within

MC1R is also known for reducing oxidative stress and promoting DNA repair



Is MC1R a youth gene?...

It seems MC1R can affect age appearance

The MC1R Gene and Youthful Looks

Highlights

- We present the first genetic associations with how old people look (perceived age)
- Variants in *MC1R*, a pigmentation gene, significantly associated with perceived age
- The *MC1R* association was independent of wrinkling, skin color, and sun exposure
- The *MC1R* genetic effect resulted in looking up to 2 years older for one's age

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In Brief

The biological basis of why some people look younger and others older for their age remains poorly understood. Of over eight million tested, Liu et al. find DNA variants in *MC1R*, a pigmentation and skin cancer gene, as the most significantly associated with perceived facial age, providing new molecular leads to the understanding of youthful looks.

Scientific publication about an interesting observation: people with non-functional MC1R gene appear older than people with functional MC1R.

The Guardian article page for 'Gene linked to youthful looks has been discovered, scientists claim'. The article is categorized under 'Ageing' and is marked as 'This article is more than 3 years old'. The author is identified as 'Ian Sample Science editor'. A social media share bar shows 492 likes and 593 retweets. A photograph of a woman with short, light-colored hair is featured below the title. An advertisement for a 'Specialist Clinical Psychologist' is visible on the right side of the page.

The Guardian

<https://www.theguardian.com/science/2016/apr/28/gene-linked-to-youthful-looks-has-been-discovered-scientists-claim>

TIME Magazine article page for 'The Gene That Makes You Look Older Than You Are'. The article is categorized under 'HEALTH + AGING'. The main image shows two hands side-by-side: one is wrinkled and aged, the other is smooth and youthful. A small advertisement for HSBC is visible on the right side of the page.

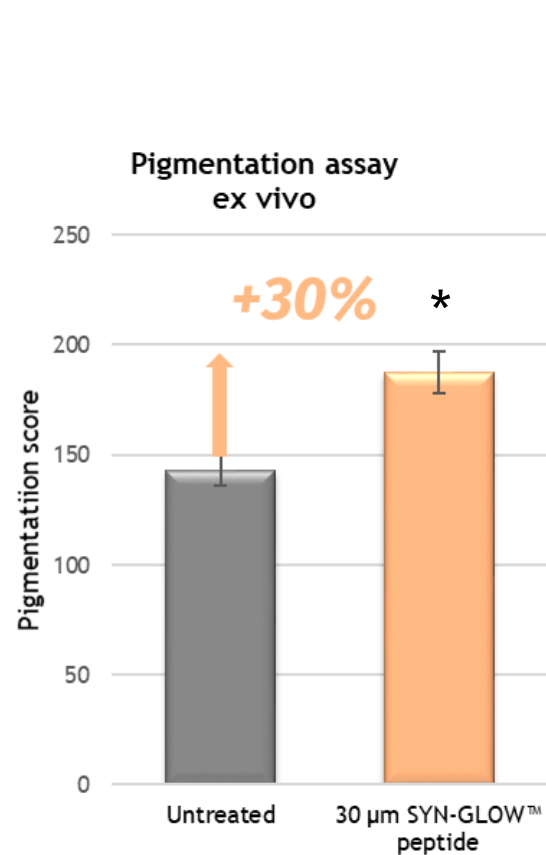
TIME Magazine

<https://time.com/4311822/gene-aging/>

**The efficacy of SYN-GLOW™ has been proven
ex vivo and in vivo with amazing results**

Significant **ex vivo** activity for SYN-GLOW™

Scientific Validation
EX VIVO



Untreated



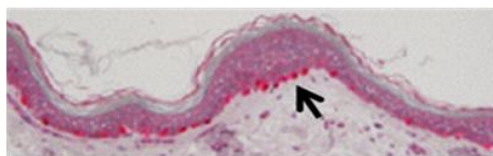
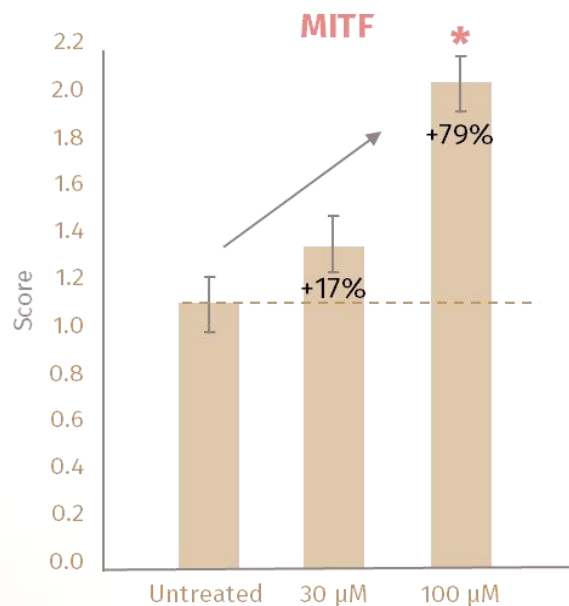
SYN-GLOW™

Up to +30% significant
more pigmentation

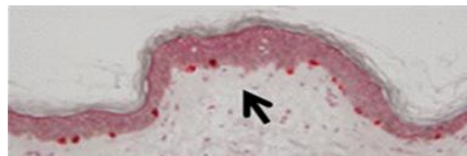
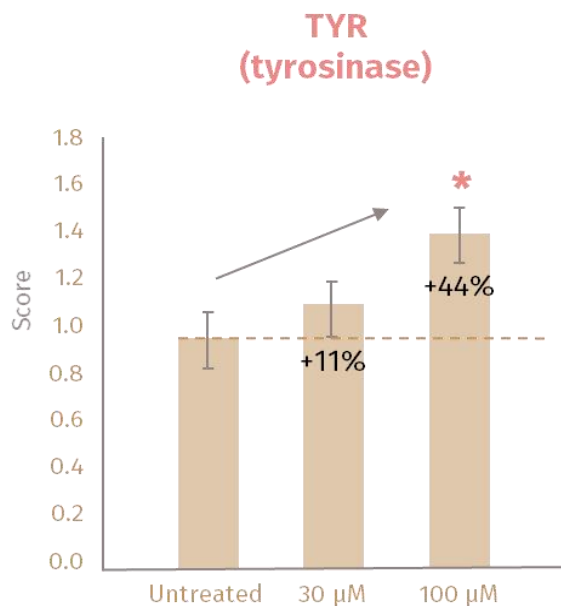
* p < 0.05 vs Untreated

Significant *ex vivo* activity for SYN-GLOW™

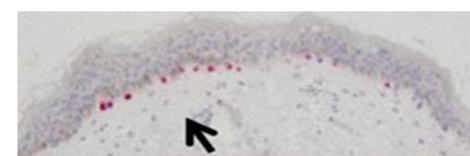
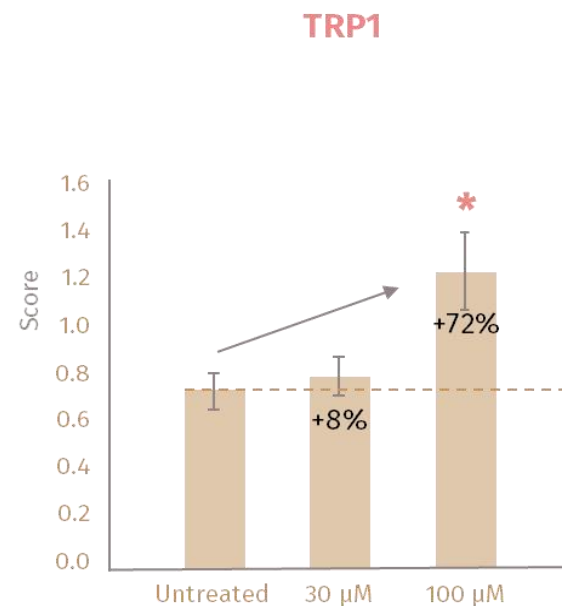
Scientific Validation
EX VIVO



Master transcription factor for melanin synthesis genes



Rate-limiting enzyme in melanin synthesis



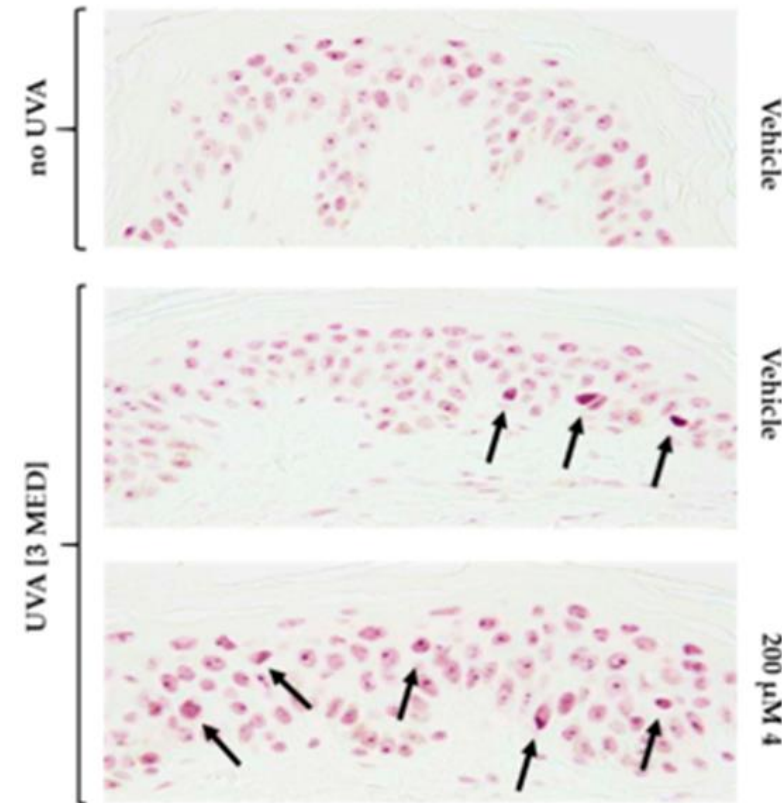
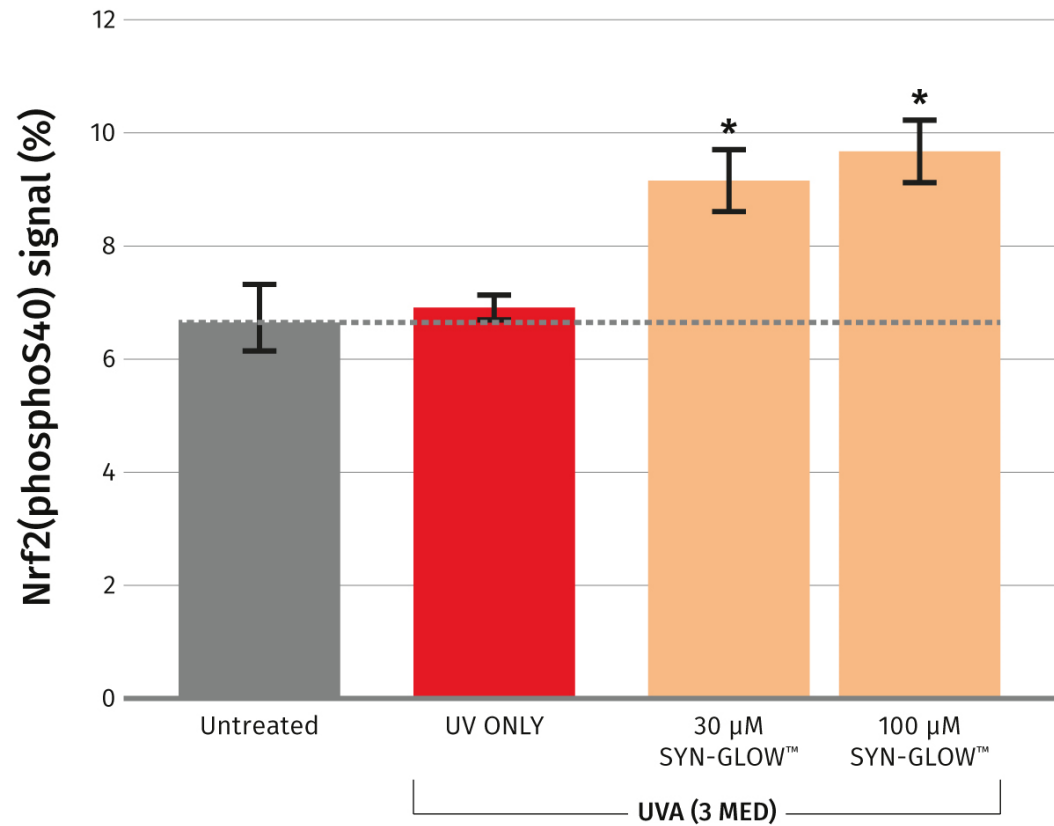
Key enzyme in melanin synthesis

Significantly boosting key regulators of Melanin synthesis

Proved to strengthen skin's defenses from within

Scientific Validation
EX VIVO

SYN-GLOW™ stimulates anti-oxidant defense factor (Nrf2) after UVA-irradiation



* p < 0.05 vs UVA-irradiated vehicle by unpaired Student's t-test.

In vivo study

- 29 Volunteers
- application at inner forearm of 3% SYN-GLOW™

Product application phase (2 times per day)																	Post application phase							
Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
ITA Measure & Photo	ITA	«Real life» simulation*				ITA					ITA						ITA & Photo							ITA



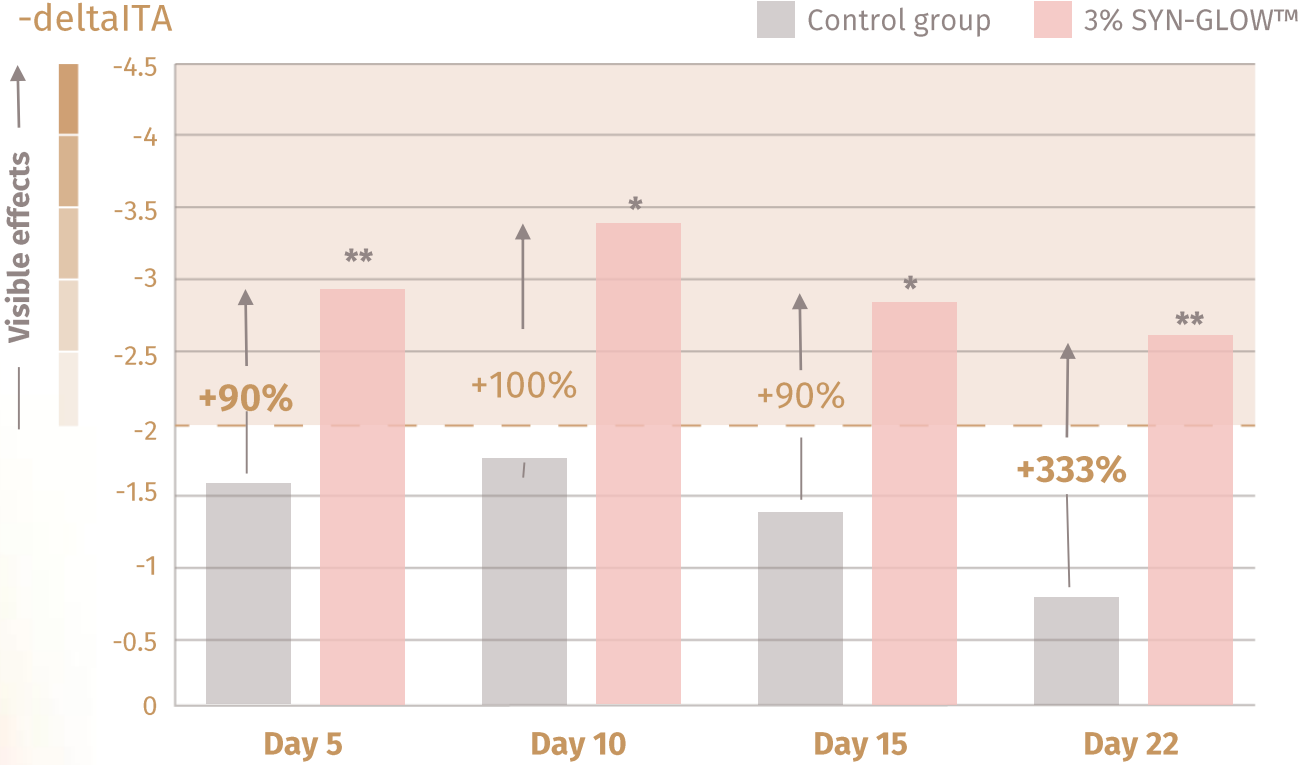
*We exposed skin to some UV light, in order to simulate “real life”. UV exposure was done with a sunlight simulator, 40% below the minimal erythemal dose (MED): this roughly corresponds to 15-30min outdoor, during avg Spring day in mid-European Country

Overall set-up

- Pre-conditioning phase: product application, no UV exposure
- Day 1-4: product application, UV exposure
- Day 5-15: product application, no UV exposure
- Day 15-22: no application, no UV exposure

Outstanding **in-vivo** results!

SYN-GLOW™ delivers visible healthy tone in just 5 days with long-lasting effect



Control group= UV only

* p<0.05 against Untreated skin «significant»
** p<0.01 against Untreated skin «highly significant»



Personalized glow boost with SYN-GLOW™

Skin images taken from test area, at Day 15

Subject 1

Subject 2

Subject 3

Subject 6

Subject 14



Control group, UV only



3% SYN-GLOW™

Amazing feedback after application

Consumers' feedback:

100% of consumers

noticed their skin looking fresher and more revitalized

Over 90% of consumers

noticed their skin looking less dull and tired

Over 80% of consumers , 3X more

noticed a facial healthy glow

Close to 70% of consumers

noticed their skin tone more even and homogeneous

Over 80% of consumers

would use this product again



Ready to use concept

Speeding up time to market



Finished product concepts featuring SYN-GLOW™ showed significantly higher purchase intent versus simple moisturiser benchmark (w/o SYN-GLOW™)

(Source: DSM Global Survey via Tuluna - 6.000 responders)

Supported claims

- Natural healthy glow in just 5 days
- Prolonged summer bronze
- Personalized result, bespoke complexion
- Strengthened skin natural defenses from within



Technical details

Origin

Synthetic pentapeptide with a unique amino acid sequence

Composition

- INCI name (active): Benzoyl Dipeptide-18 D-Phenylalanyl Arginyl D-Tryptophan Dipropylamide Mesylate
- Content of active material: approx. 1000 ppm
- Vegetable glycerin-based aqueous solution
- No preservatives
- PEG free
- Vegan friendly

Manufacturing process

Made by cutting-edge pentapeptide technology

Recommended dosage

1 – 3%



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