A close-up, soft-focus photograph of a woman's face, focusing on her eyes and freckles. The lighting is warm and natural, highlighting the texture of her skin.

SIV™

PATHOLOGY OF LEAKY SKIN

**A significant driver of skin aging,
skin disease and chronic illness**

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OUR SKIN ECOLOGY

We have about 20 square feet of skin on our bodies which represents one of the largest organs in our system

On that skin we have over 1.5 Trillion resident bacteria and up to 1000 different species

The most common genera on the skin are propionibacteria, corynebacteria and staphylococci

In addition, we have both transient microbes and resident microbes on the skin. The transient can last from hours to days and the resident microbes are more permeant

The transient microbes, however, can impact the balance of resident microbes

ECOLOGY OF THE FACE



The face is a sebaceous area of the body – high oil levels

The face also has lots of anaerobic environments

Because of the high oils and anaerobic areas, the face has lower diversity with predominantly Propionibacterium as they are lipophilic

ECOLOGY OF THE ARMS, BACK & LEGS



Arms and back are drier with higher diversity

These areas tend to have a mix of Propionibacterium, staphylococcus, micrococcus, corynebacteria and streptococcus

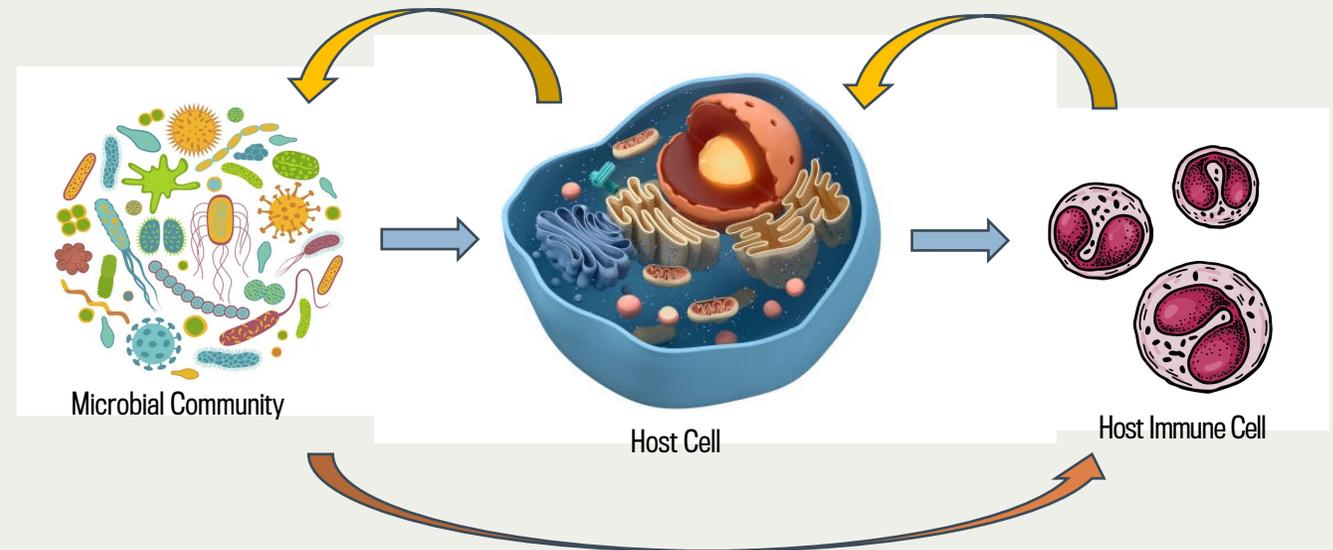
Major Disruptors or Influencers of our Skin Ecology

- Age
- Gender
- Genetics
- Environment (pollutants, ecosystem, etc.)
- Climate
- Cosmetics
- Diet
- Hormones
- Immune Function
- Lifestyle
- Gut Health

Ecological Disruption of the skin is the primary insult that results in disruption to the appearance and function of skin cells. This is the root cause driver of skin aging and skin disorder

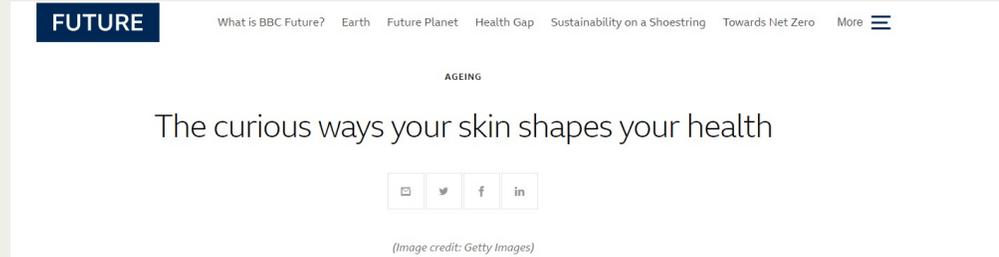
Core Tenet of Leaky Skin

As the skin microbiome changes, it alters the relationship between the host and the microbes and thereby impacts host Aging and Life Expectancy



- The Immune system of the host modulates the microbial community
- The microbial community and its composition have a great impact on the hosts immune system
- Both the immune system and the microbial community impacts the function of the host cell – with skin cells we end up seeing classic aging symptoms as well as inflammatory pathologies
- We end up losing the barrier function of the skin driving systemic inflammation
- Skin Microbiome is arguably the Most Accurate Predictor of Biological Age

A SCIENTIFIC REVELATION



By Zaria Gorvett  23rd August 2023

Weathered or unhealthy skin is emerging as a major risk factor for almost every single age-related disease, from Parkinson's to type 2 diabetes.

I'm canoeing through the Ardèche gorge in southern France – and attracting some peculiar looks. It's early afternoon on a blazing July day, and the sky is a perfect canvas of cobalt blue. Though the river is sheltered on either side by towering cliffs and limestone escarpments up to 300m (980ft) high, the sheer irradiating power of the sun has never been more visible to me. Its rays have turned the surface of the water into a winding path of scintillating light, so bright it blinds you to look at it. And I am taking no chances; I have chosen my outfit with the seriousness of an explorer trekking off into the Sahara.

It turns out skin health can be used to predict a number of seemingly unconnected factors, from your **bone density** to your risk of developing **neurodegenerative diseases** or dying from **cardiovascular disease**. However, as the evidence has begun to add up, the story has taken a surprise twist. Is the skin simply a living tally of the damage we have accumulated, or is it more complicated? Could it, in fact, be keeping healthy people healthy – and dragging unhealthy ones down further?

AGED SKIN DRIVES CHRONIC DISEASE RISK

EXAMPLES OF COMMON CONDITIONS DRIVEN BY SKIN MICROBIOME DYSBIOSIS



Eczema or Atopic Dermatitis

Driven by an increase in pathogenic bacteria; staphylococcus aureus



Psoriasis

Driven by a disrupted balance and low diversity with an increase in corynebacterium, staphylococcus and streptococcus

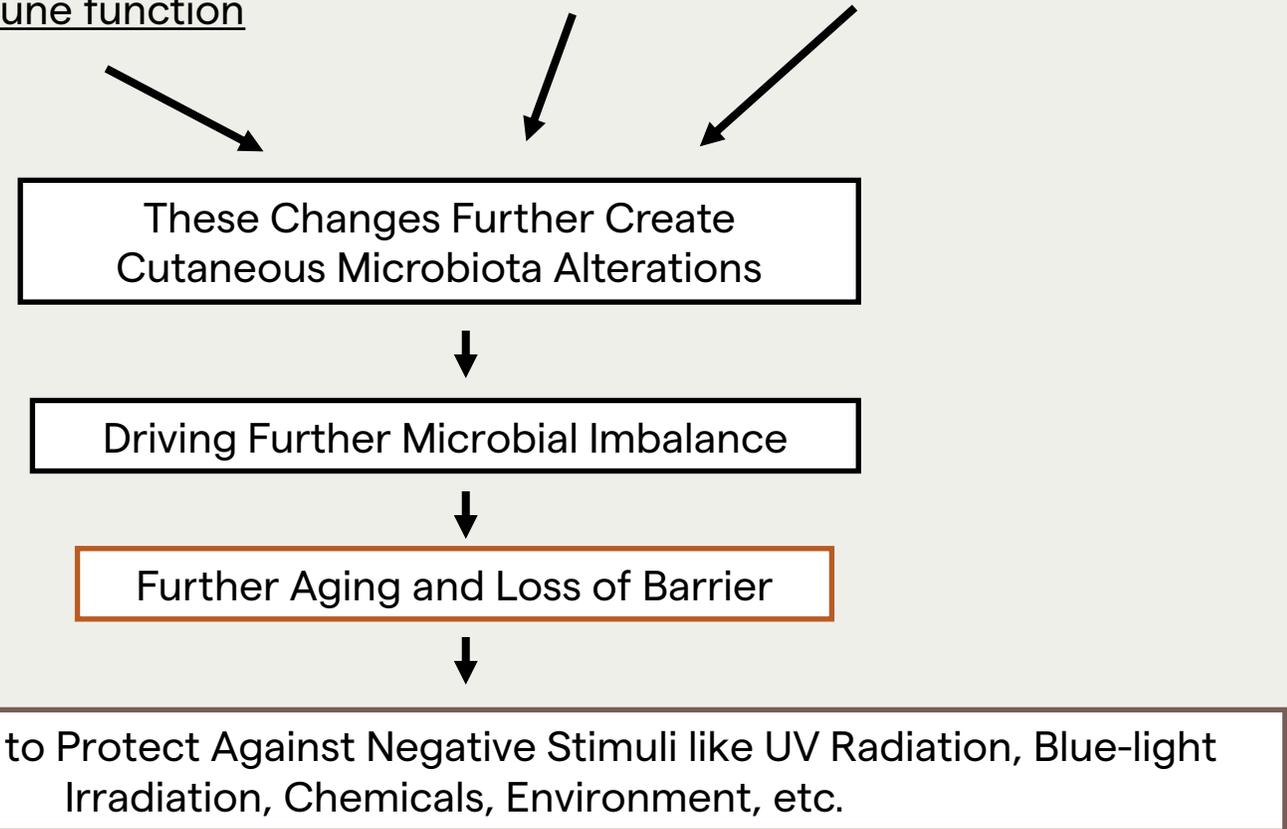


Acne

Driven by an increase in commensal cutibacterium acnes

EXAMPLES OF COMMON CONDITIONS DRIVEN BY SKIN MICROBIOME DYSBIOSIS

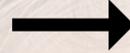
AGING – Driven by an increase in *Corynebacterium* and lowering of *Propionibacterium*. Decrease in *Acinetobacter* and increase in *Proteobacteria*. Aging skin is characterized by lowered sebum production, lower hydration and an increase in immune function



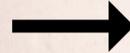
Healthy Balanced Skin Microbiome

Balanced Skin

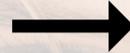
Prevents the overgrowth of pathogens thus reduced toxin production and recruitment of immune cells



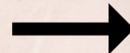
Produces adequate protease enzyme to help turn over of the stratum corneum



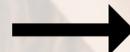
Produces adequate lipase enzyme to effectively breakdown and regenerate the lipid layer



Produces Urease, free fatty acids and regulates sebum to manage the pH of the skin



Effective quorum sensing and biofilm production. Maintains a healthy balance and drives antioxidant function and quenching of free radicals



Result

Skin is resilient with low levels of inflammation and high tolerance for negative stimuli

Skin repairs fast, has high glow, fresh look and thicker appearance

Skin maintains moisture, strong barrier resistant to bacterial translocation, resistant to water loss, proper functioning collagen and elastin fibers

The skin is pH balanced, prevents fungal and yeast overgrowth, preserves collagen and elastin function and concentration. Maintains youthful composition to the skin. Prevents sagging of the skin

Skin is resilient to oxidative stress and damage and prevents skin senescence

Dysbiotic Skin Microbiome

Dysbiotic Skin

Pathogen overgrowth, high toxin production and recruitment of immune cells to the skin

Low protease production, skin does not turnover adequately. Accumulation of damaged skin cells

Loss of ceramide and lipid barrier. Skin loses moisture and becomes leaky. Microbes and toxin migrate through driving inflammatory responses

Yeast and/or fungal overgrowth, reduction in collagen and elastin function and concentration

Skin becomes very susceptible to oxidative damage and accumulates free radicals. UV and other stimulants drive senescence, especially in melanocytes



Red, Sensitive and Irritated skin highly susceptible to conditions like eczema and acne



Dull, thin skin



Dry and Irritated skin



Thin skin with wrinkles and fine lines



Discoloration and hyperpigmentation



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PARTICIPANT 1

Baseline

Bacteria Name	Taxonomy Id	Relative Abundance
Propionibacteriaceae	31957	65.74%
Corynebacterium ureicelerivorans	401472	8.01%
Meiothermus silvanus DSM 9946	526227	6.33%
Pseudomonas sp. pHDV1	253237	2.99%
Corynebacterium mucifaciens	57171	2.72%

Day 14

Bacteria Name	Taxonomy Id	Relative Abundance
Roseomonas sp. FDAARGOS_362	2018065	74.93%
Meiothermus silvanus DSM 9946	526227	6.76%
Pyrinomonas methylaliphatogenes	454194	2.24%
Dermacoccus sp. CCH2-D9	1768779	1.72%
Corynebacterium mucifaciens	57171	1.67%

Baseline

Dark Matter Name	Taxonomy Id	Relative Abundance
Cutibacterium acnes	1747	59.64%
Staphylococcus epidermidis	1282	5.32%
Uncultured Corynebacterium sp.	159447	4.61%
Uncultured Bifidobacterium sp.	165187	4.05%
Bifidobacterium longum	216816	3.38%

Day 14

Dark Matter Name	Taxonomy Id	Relative Abundance
Rhodocyclaceae bacterium	1898103	30.44%
Dermacoccus sp. UBA1591	1946405	15.97%
Cutibacterium acnes	1747	13.27%
Micrococcus luteus	1270	7.93%
Uncultured Corynebacterium sp.	159447	6.22%

PARTICIPANT 1

**AFTER 14
DAYS**

Reduced
inflammation

Reduced blemish
count

Regulated oil level

Improved skin tone,
texture, and clarity

BEFORE



AFTER



PARTICIPANT 2

Baseline

Bacteria Name	Taxonomy Id	Relative Abundance
Peptoniphilus lacrimalis DNF00528	1401070	23.63%
Propionibacterium sp. KPL1844	1203573	13.71%
Corynebacterium ureicelerivorans	401472	12.73%
Lactococcus lactis subsp. cremoris	1359	10.40%
Cutibacterium granulosum DSM 20700	1160719	9.53%
Streptococcus infantis ATCC 700779	889204	6.10%

Baseline

Dark Matter Name	Taxonomy Id	Relative Abundance
Uncultured streptococcus sp.	83427	37.90%
Alistipes	239759	25.06%
Micrococcus luteus	1170	15.38%
Cutibacterium acnes	1747	14.36%
Alistipes communis	2585118	3.62%

Day 14

Bacteria Name	Taxonomy Id	Relative Abundance
Bacillus coagulans	1398	66.22%
Bacillus amyloliquefaciens	1390	16.66%
Staphylococcus epidermidis	1282	5.06%
Streptococcus sp. OH4692_COT-348	2491052	4.90%
Meiothermus silvanus DSM 9946	526227	0.71%

Day 14

Dark Matter Name	Taxonomy Id	Relative Abundance
Uncultured streptococcus sp.	83427	26.44%
Bacillus amyloliquefaciens	1390	23.60%
Cutibacterium acnes	1747	11.79%
Bacillus sp. (in: Bacteria)	1409	11.56%
Bacillus pumilus	1408	10.75%
Staphylococcus epidermidis	1282	8.88%

PARTICIPANT 2

**AFTER 14
DAYS**

Reduction in
number of acne
lesions

Reduced
inflammation

Improved skin tone,
texture, & clarity

BEFORE



AFTER



AFTER 30 DAYS

Reduction in
number of acne
lesions

Reduced
inflammation

Regulated oil levels

Improved skin tone,
texture, and clarity

SIV[™]

BASELINE



DAY 30



AFTER 14 DAYS

Reduction in
number of acne
lesions

Reduced
inflammation

Regulated oil levels

Improved skin tone,
texture, and clarity

BASELINE



DAY 14



BASELINE

DAY 14

DAY 21

**AFTER 21
DAYS**

Reduction in number of
acne lesions

Reduced inflammation

Regulated oil levels

Improved skin tone,
texture, and clarity



SPORE BASED BIOME BALANCING SERUM

THE NEW ESSENTIAL FOR ALL SKIN TYPES



SIV™

Builds Resilience - Establishes a healthy skin foundation

Supports Balance - Adapts to your unique skin biome to calm and soothe irritated skin

Delivers Relief - Targeted serum that supports the restoration of your microbiome to promote healthy-looking skin

The first bioactivated skincare serum proven to solve issues by balancing your unique skin biome to ensure homeostasis.





QUORUM-SENSING TECHNOLOGY

Quorum sensing allows bacteria, such as *Bacillus* spores, to read microbial signatures and in response produce virulence factors, form biofilms, and regulate gene expression to balance out the skin microbiome.

SIV's Spore Based Biome Balancing Serum adapts to your specific skin microbiome to help build resilience with a healthy skin foundation.

SIV™

APPLICABLE TO ALL

NO CONTRAINDICATIONS

NO PURGING

**EASE OF USE – ONCE A
DAY APPLICATION**

**EFFECTIVE WITH RAPID
RESULTS**



**Rebalancing the skin's
microbiome provides a
healthy canvas, allowing
other products and
treatments to work better.**

SIV™

Lightweight & stabilizing formula containing physiologically identical ingredients that your skin recognizes.



Bacillus: A proprietary blend of Bacillus spores activate a healthy skin foundation and visibly improves skin. Positively influencing your unique skin biome and establishing balance. Bacillus spores lay dormant in the formula and are designed to activate from the natural heat, oils, and water from the skin. This allows the spores to change and improve the skin microbiome by targeting overgrown bacteria, while facilitating the growth of other essential species- effectively balancing the skin microbiome

Squalane: Biomimetic oil, molecule derived from non-GMO sugarcane that mimics squalene, beneficial in promoting skin hydration

Caprylic/Capric Triglyceride: a mixture of caprylic and capric fatty acids derived from coconut oil; help replenish skin's surface and help it to resist moisture loss

Glyceryl Caprylate: a natural, plant-based, emollient derived from glycerin and plant fatty acids; restores the oils of the skin, regulates the skin moisture and acts as a humidifier to the skin

HOW TO USE IN YOUR PRACTICE

BACK-BAR

*Use at the end of the finishing products
in an appointment

- 1 Toner
- 2 Biome Balancing Serum
- 3 Moisturizer
- 4 SPF

AT HOME

- 1 Toner
- 2 Biome Balancing Serum
- 3 Moisturizer
- 4 SPF

You can use our serum anywhere on the body. Face, neck, décolletage, back, etc.

SIV™

sivcare.com
@sivcare

A close-up, artistic portrait of a young woman with light skin, freckles, and striking blue eyes. She is looking slightly to the right of the camera with a soft, thoughtful expression. The lighting is warm and directional, highlighting the texture of her skin and the intensity of her gaze. The background is blurred, showing indistinct shapes and colors.

THANK YOU

SIVTM