

TECHNOLOGY OVERVIEW

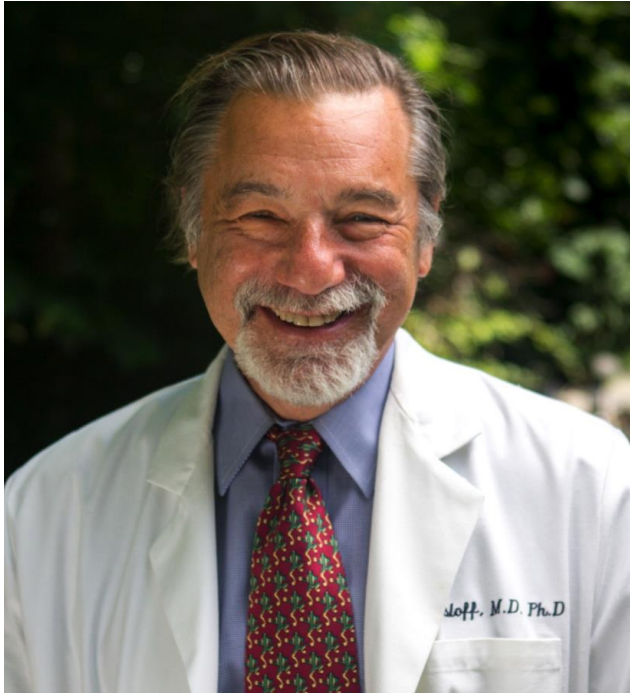


bring out the natural beauty in your hair

Technology Summary

- Illumai is a meaningfully different, patented, bio-science-based approach to healthy, beautiful hair & skin. Addresses “white space” in a \$60b market globally
- Invented by [Michael Zasloff](#), MD, PhD, an internationally recognized medical scientist; former Director at NIH, Dean of Research at Georgetown Medical; 47 patents; hundreds of articles; speaks globally on the relationship of the interactions of microbiome and the skin.
- Illumai is a 3-product system, each relying on proprietary technology. One patent has been granted and two patents are pending.
- After market research and analysis, a new brand positioning as the world’s first “Biome Care System” for hair (and later, for skin) has been developed by our brand leader, [Diggi Thomson](#), the former director of brand at Unilever.
- Over \$1m of development so far; seeking capital for e-commerce tests of new biome care positioning to demonstrate market acceptance.

Michael Zasloff, M.D., Ph.D.



- **Pediatrician, Geneticist, Immunologist**
 - Former Department Director, Genetics, N.I.H.
 - Former Dean of Research, Georgetown Med
 - Founder, publicly traded pharmaceutical co.
- **Medical Research Scientist**
 - 47 patents, hundreds of peer-reviewed papers; scores of speaking engagements
 - Featured in “100 New Scientific Discoveries” [book](#) published by Time Magazine
 - 25 years of biomedical research into the self-healing mechanisms of skin & microbiome
- **Chairman & Founder of illumai**

*When confronted with the “**symptom** solutions” in hair care today, Dr. Zasloff invented an entirely new approach, inventing a **systems** solution that really works*

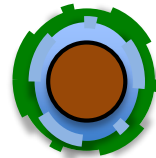
The Illumai Biome Care System



A 3-step system designed to restore & maintain the integrity of your biome in order to promote a naturally healthy scalp and bring out the natural strength and beauty in your hair

Cleanse

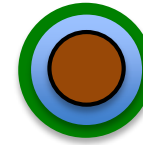
Non damaging shampoo with **XO-70®**



Effective cleansing that leaves the biome intact

Nurture

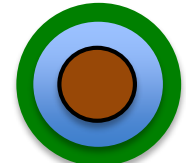
Restorative conditioner with **Isoleucine**



Targeted repair of wear and tear of both layers of the biome

Protect

Finishing leave-In spray with **Lipid Complex**



Overall reinforcement of the biome's protective layers



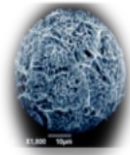
Illumai's Biome-Care Ingredients

Each product is built around unique active ingredients with a degree of patent protection to each

Cleanse

with

XO-70®

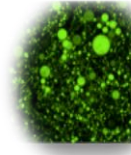


A gentle yet effective cleansing agent derived from plant starch that leaves the biome intact while also strengthening the 'waterproofing' layer on the scalp and protecting it from irritation and microbial attack

Nurture

with

Isoleucine

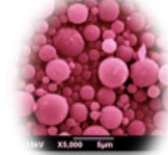


An amino acid that naturally stimulates the generation of the lipids and anti-microbial peptides & proteins that comprise the protective layers of the biome

Protect

with

Lipid Complex™



Concentrated "nano-aggregates" of lipids that provide all-over strengthening and protection of the biome against heat & styling damage

Patent Protection

Patent pending for combination of LMG with decyl glucoside (which we trademarked as XO-70®). It's key to making LMG stably soluble, therefore usable in personal care products

Patent granted regarding the ability to add isoleucine at 'active' levels in personal care products and to make claims regarding it's 'stimulant' properties

Patent pending for the creation of "nano-aggregates" of the active ingredients, thereby delivering high concentrations of repair ONLY at point of depletion or abrasion on hair shaft

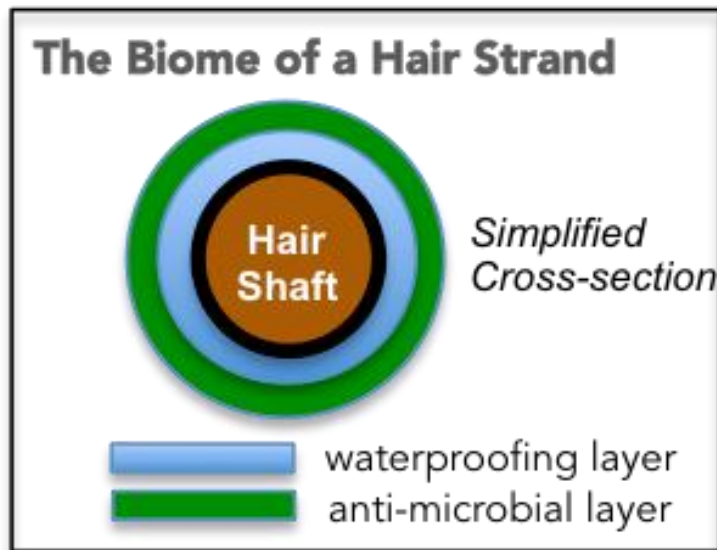
System Features and Benefits

Illumi Biome-Care System For Hair			
	CLEANSE	NURTURE	PROTECT
	Gentle Cleanser	Restorative Conditioner	Leave-In Spray
	Health Benefits		
	Targeted Repair & Holistic Nurturing of your Naturally Protective Biome - the Foundation of a Healthy Scalp & Hair		
Notes On Action on the Biome	Thorough but non-damaging cleansing of the hair and scalp and targeted restoration of the scalp's natural moisture barrier; zero preservatives, non-ionic structure leaves no anionic residue	Targeted repair of the hair's natural water barrier and stimulation of the scalp and hair's natural powers of self-protection	Final targeted repair and all over enhancement of the hair's natural water barrier, to enhance shine, strengthen hair, maximize manageability and protect against heat & styling damage
	Protective Cleansing (XO-70) <ul style="list-style-type: none"> * Cleans dirt & excessive oils * Leaves sebum (peptides, proteins and moisturizing oils) intact * Leaves intercellular lipids intact in epidermal cells (scalp) * Without preservative biocides, leaves microbiota intact * Leaves no silicone, artificial oil or other residue on hair or scalp. 	Targeted Repair / Restoration (XO70 & BTMC - lipids) <ul style="list-style-type: none"> * BTMC and other lipids begin targeted repair of the hair's moisture barrier * Isoleucine stimulates the scalp to naturally produce anti-microbial peptides * Quats not necessary to neutralize anionic residue (viz conventional shampoos) * No silicones to smother scalp or weigh down hair * No preservatives to kill microbiota 	Completion of Repair / Restoration <ul style="list-style-type: none"> * Upon agitation, the two oils form "nanoaggregates" of micellar structures with cationic salts * Because there is no anionic residue on the hair, the only source of negative charge is exposed areas cortex, i.e., areas of depletion or abrasion in the sebum * The nano-aggregates electrostatically adhere ONLY to such areas * No silicones or other residue to smother scalp or weigh hair down
	Beauty Benefits		
	Naturally Beautiful Soft Sexy Hair		
	<ul style="list-style-type: none"> * Squeaky Clean - because no detergent or silicone film is deposited * Vibrant Color - because it is 100% color safe * Rich Creamy Lather - for an indulgent experience, because XO-70 creates an extremely dense, luxurious, small-cell lather. 	<ul style="list-style-type: none"> * Detangles (partially) - because the lipids make comb-out easier * Weightless Volume - because the protein building blocks (the amino acids) add body and bounce, but (unlike other conditioners) it adds no silicone coating * Unique Natural Shine - because there is no dulling film (ionic salts) or other coating that changes the hair's reflective properties 	<ul style="list-style-type: none"> * Manageable - because the nanoaggregate lipids only fill in the gaps in the biome, the hair is completely restored; behaves naturally now * Soft to Touch - because the restored hair has no frizz at all, hair is "kitten soft" * Luminously shiny - because there is no dulling film, or painted over silicone coating, each strand of hair is able to shine
	Convenience Benefits		
	Dries in Half the time		
	Saves Money: very dense products last a long time; fewer visits to colorist / treatments	Longer time between washes	Faster Drying (yes)
	Active Ingredients		
	A System of Inter-dependent patented and patent-pending ingredients and formulations		
	XO-70	Isoleucine	Lipid Complex
	Because Cleanse contains XO-70, a non damaging and high performance cleansing agent with unique ceramide like properties, it both cleanses without harming the biome while also restoring the scalp's natural moisture barrier	Because Restore contains an 'active level' of isoleucine, it naturally stimulates the scalp to produce the biome-care packet of natural moisturizers and anti-microbial peptides and proteins essential for maintaining a healthy scalp and beautiful hair	Because Protect contains a patent pending lipid complex that concentrates water-repelling lipids where they are still needed, it finishes repair of the naturally protective moisture barrier, while the light misting enhances the hair's all-over protective coating
How the Magic Works	<p>XO-70 is a gentle cleanser that does not strip off the biome and therefore cleans while leaving the barrier that protects color or treatment-infused hair shafts intact.</p> <p>It has 2 unique properties vs any other cleanser:</p> <ul style="list-style-type: none"> - unique rich lather in a gentle, no-sulfate, no-sulfate, cleanser - ceramide-like properties that mimic the lipids that the skin produces, these act as the protective moisture barrier / water barrier of the skin <p>The consequence:</p> <ul style="list-style-type: none"> - the lather means that the gentle cleanser spends longer in contact with the scalp and hair compared to other non-foaming or non-sulfate shampoos / conditioning cleansers - Why it is both gentle and a very effective cleanser - the ceramides are attracted to where there are gaps in the moisture barrier in the scalp, therefore repairing one of the key defensive properties of the biome <p>The active ingredient is LMG, a manufactured molecule developed by F&G in the 1950's that has remarkable properties, is relatively cheap and entirely safe. It is typically insoluble in solution.</p> <p>LMG is the key active in XO70 which is combined with decyl glucoside to make it soluble at high concentrations and/or low temperatures and therefore usable in personal care products</p>	<p>Isoleucine is a naturally occurring 'essential' amino acid (a building block of protein) discovered (and clinically validated) to naturally stimulate skin cells to produce anti-microbial peptides and other elements needed for sustaining a healthy, biome</p> <p>The two elements are</p> <ul style="list-style-type: none"> - a natural moisture barrier made up of ceramides, a kind of lipid - a layer of antimicrobial peptides and proteins that promote a healthy microbiome, the community of healthy microbes that live on the surface of the scalp and hair which repel the harmful microbes from damaging the scalp and hair 	<p>The unique applications lies in the way the formula causes the BTMC and PEG-5 lipids to form 'nano-aggregates'...like concentrated paint balls of the lipids versus standard spray where you get smaller particles.</p> <p>As they are positively charged, these nano-aggregates are naturally attracted to where there is any damage to the moisture barrier of the hair. (The damage shows up as negatively charged.)</p> <p>While these paintballs are of course most attracted to the where they are most needed, the spray does leave a fine layer of lipids all over the hair that work to make it much more manageable than just after the conditioner</p>
Our Patents cover	Illumi has a pending patent around this, and therefore nobody else could viably use LMG in personal care products	Illumi has a patent on the ability to add isoleucine at 'active' levels and to make claims regarding it's 'stimulant' properties...so therefore nobody else can do what we are doing with it.	Around creating 'nano-aggregates' of the active ingredients
Clinically Proven To	To enhance the water barrier of skin, improve hydration, and reduce dryness	Isoleucine is clinically proven to stimulate antimicrobial peptides and proteins	Improve manageability

[Click to expand](#)

The System Is The Solution:

First, Respect The Biome

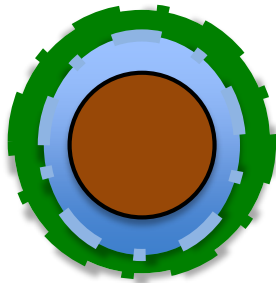


The “**biome**” is the natural, living, self-healing ecosystem of skin/scalp cells, follicles, hair strands, and the peptides, proteins, moisturizing oils and microbiota that protect our skin and hair from damage and infection. It’s composed of two critical subsystems produced by the body:

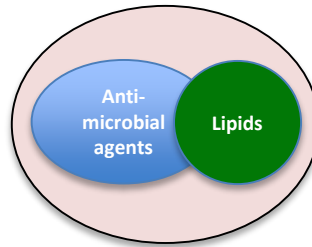
- A **water-proofing layer** of natural lipids (oils and waxes) that prevent moisture loss
- An **anti-microbial layer** of peptides and proteins that create an environment friendly to the good microbes (and hostile to the bad ones) that colonize all living surfaces

When the biome is in balance, we experience a healthy, irritation-free scalp, and hair that is shiny, soft, full, manageable, resilient, strong and healthfully beautiful

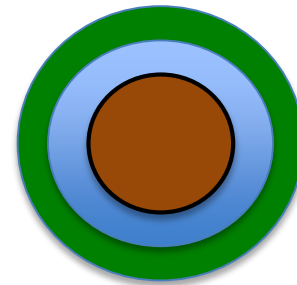
The Biome Regenerates Itself When We Don't Mess With It



Biome experiences
depletion & damage



Lamellar packets are
released from the skin,
coating skin, scalp, hair

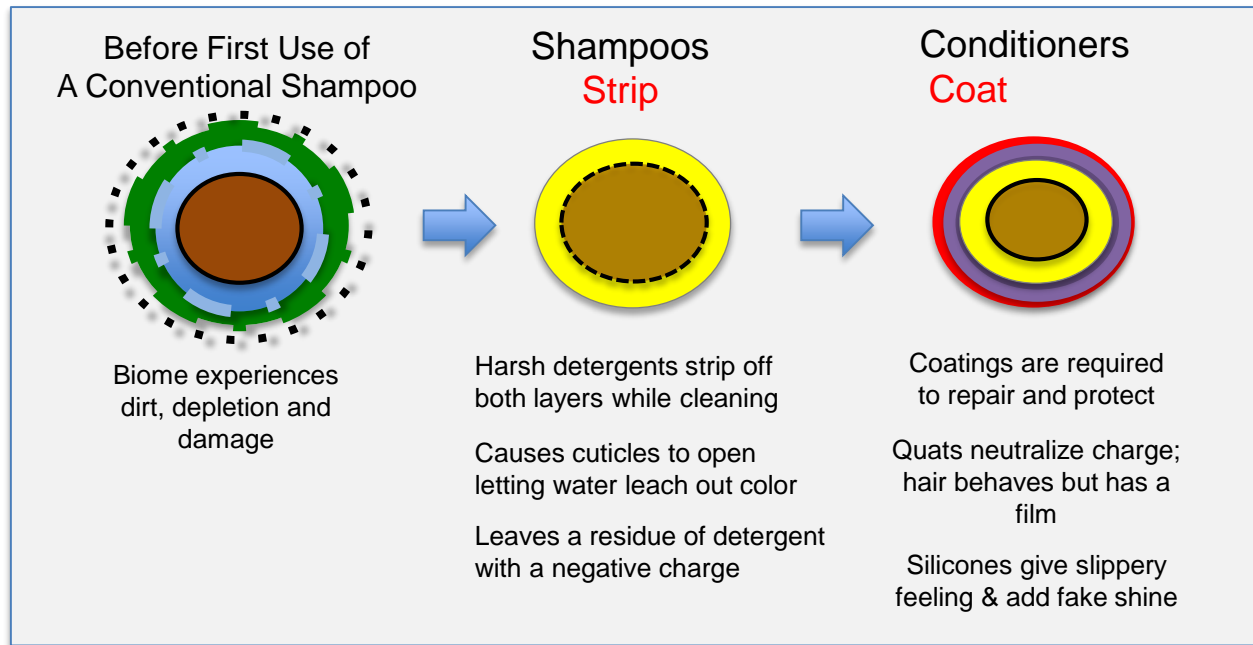


Biome is repaired
& reinforced

- Like our immune systems, when the biome experiences wear and tear or is attacked, the skin releases 'care packages' for the biome
- The problem: modern human lifestyles overwhelm this self-healing process with "insults" -- hair dye, detergents, pollution, flat irons, styling, etc.

When the biome is in balance, we experience a healthy, irritation-free scalp, and hair that is shiny, soft, full, manageable, resilient, strong and healthfully beautiful

The Damage-Mask Cycle of **All** Other Hair Care Products



- Scalp health is compromised, leading to dryness, flaking and irritation
- Hair strand's integrity is compromised so depletion & damage continue
- These products emulsify the lipids, flush the peptides & poison the microbiota. Then, they paint over the damage with an artificial shine

Refined For Consumer Use at Salon Mario Russo



- [Mario Russo](#) ranked [“top 100 US Salon”](#) (Elle)
- The stylists at Salon Mario Russo tested the various Illumai formulations during an extensive product development period
- Dr. Zasloff adjusted the formulations
- Goal: Products that ordinary consumers could use at home, between salon visits, to maintain healthy, beautiful hair
- Result: Success

Extraordinary, Remarkable Results

No matter what symptoms you start with, Illumai restores your “high-school hair” by bringing your biome back into balance.



- Dry → moisturized
- Oily → normal
- Fading → no leaching of color
- Dull, lifeless → shiny, vibrant
- Flat → weightless volume
- Scalp irritation, flakes → gone
- Frizz → gone
- Flyaways → gone
- Curls → restored

Note: We can demonstrate and prove each of these claims and have testimonials supporting all of them.

From Great Product To Great Brand



To make a great brand, you need two things:

1. A **great product** you can buy
 - Dr. Zaslavoff invented it: Illumai
 - Mario Russo refined it for consumers
2. A **compelling idea** you can buy into
 - Diggi Thomson created that: the first “Biome Care System for the hair” – a systems solution creating **healthy** beauty

The Team

- CEO – Wayne Willis
- CSO – Michael Zasloff
- VP Product – Mario Russo
- VP Marketing – candidates TBH upon funding
 - in the meantime, relying on Diggi Thomson, consultants and outsourced services
 - agency identified ... just add money
- VP Delivery – Elizabeth Slotta
- Salon Management – Maria Fei (Mario Russo)