Nutricosmetics

The intersection between personal care and nutrition as the evolving concept of beauty from within

Paula Simpson
Founder, Nutribloom Consulting
“Topical skincare products address only 20% of your skin. The other 80% is affected by what you eat and drink, including your dietary supplements.”

Dr. Howard Murad

Agenda

An overview of global trends in beauty nutrition

Most promising and clinically validated ingredients within the beauty nutrition space
Today consumers are taking preventative, holistic and eco-conscious approaches towards their health, personal care and lifestyles.

The lines between wellness and beauty – feeling good, looking good and doing good – are blurring.
Globally consumers are living their lives too fast, putting stress in with everyday life.

Mintel reported Asia Pacific accounted for a third of global beauty and personal care products, launched between January-September 2018, that help with de-stressing and relaxation.

Becoming common knowledge that daily lifestyle habits have an impact on skin.

From beauty to self care; mood enhancing and lifestyle products connect with Nutricosmetics.

Mintel Trend Report “Mood to Order” 2018
Holistic Beauty - From Trend to Mainstream

Global **Wellness Industry** $4.2 trillion industry (over 12% growth from 2015)

14% growth of **certified organic** and **natural beauty** continues to outpace the wider wellness industry.

**Vegan** product launches have risen by 175% from July 2013-June 2018

**Clean, Responsible & Transparent (Europe)**

Organic beauty brands are pioneering non-plastic, non-toxic and 65% of consumers expect brands to share ingredients sourcing

*Euromonitor’s Top 10 Global Consumer Trends 2019; Soil Association Beauty & Wellness Report 2019*
The Opportunity
Recent Market Drivers

Attitudes
- Feeling good = Looking good
- Collagen Craze
- We Are Ageless
- Millennial adoption on beauty wellness movement

Lifestyle
- Wellness nurtures Natural Beauty
- Prevention vs Treatment
- Multifunctional, Convenient, Affordable
- Accessibility & Personalization

Clean Health & Beauty Movement
- Eco-friendly & Transparent
- Rapid growth in Natural Skincare (Europe, US)
- Ingredient watch lists “free from” and certifications by third party associations
Beauty from Within
Ingredient Market Trends

Science
- The Microbiome
- ECS
- Keratin Peptides

Lifestyle
- The Stress Effect

Eco-conscious
- Non-Toxic
- Transparent
- Sustainable

NUTRICOSMETICS
Skin Aging

• **Skin cell renewal slows** - build up and thicker layer of dead skin cells, production of keratin also slows causing drier skin and epidermis becomes thinner and more transparent

• **Reduced vascular and antioxidant network**

• **Reduced sebum production** affecting skin’s natural oil balance and smooth appearance

• **pH changes** - disrupting skin microbiome and barrier function (TEWL and volume loss)

• **Weakening framework** - break down structural proteins
Wellness + Beauty

The benefits of glowing skin, minimizing wrinkles, boosting collagen, and moisture are no longer sought after in topical creams and serums, but also incorporated into supplements and powders.

Beauty foods & Nutricosmetics work systemically; within the deeper dermal layers to nourish, revitalize and protect the skin.
The Skin Microbiome

Dynamic Complex Ecosystem
a single square centimeter of the human skin can contain up to one billion microorganisms (bacteria, fungi, viruses, mites)

Introduced at Birth
genotype, gender, diet, hygiene, lifestyle, and environment

Resident vs Transient

Host & Microbe Relationship
Mutualistic, Commensal, Detrimental

Skin Region (Dry, Humid, Moist)
influence growth, activity & diversity
The skin is a complex network of interactions between microbes, epidermal cells and immune receptors

“Symbiosis” between host and environment

“Dysbiosis” shift in presence and activity of normally residing microbes, altering function of skin microbiome and how skin interacts and responds to environment & products

“Dysbiosis” accelerated skin aging, hypersensitivity, allergic & chronic skin conditions
"Dysbiosis"

Bio-communicative Network
* guts, skin, immunity*

Skin Tissue
* hypersensitivity, chronic Inflammation, skin barrier function*

Skin Conditions
* acne, atopic dermatitis, psoriasis, sensitive or reactive skin, dandruff, photoaging and rosacea*

Microbial Imbalance, Low Diversity
The Skin Microbiome
Pre-Probiotics, Synbiotics

Probiotics

*living microorganisms*  
*(genus, species, strain sub-species)*

- Protect from environmental aggressors
- Promote a state of “symbiosis”
- Detoxify and prevent overgrowth of harmful pathogens from dietary or topical exposure
- Anti-inflammatory and anti-allergic effects for sensitive and chronic skin conditions
- Strengthen skin barrier; stimulate ceramide production and prevent excess TEWL
- Produce and/or provide nutrients for the “good” resident skin bacteria
- Postbiotics are non-viable bacterial or metabolic by products produced by probiotic microorganisms that have biologic activity on the skin

Prebiotics

• Non or partially digested carbohydrate fibers, fermentable by intestinal bacteria and have a positive effect and modify the gut and skin microbiota
• Source of fuel for good bacteria, promote “symbiosis”
• Encourage production of metabolites that regulate immune function & inflammation
• Increase bioavailability of nutrients (minerals)
• Applied topically, rebalances skin resident bacteria and microbiota
Supplement & Skin Condition

**Photo-Aging** - *Lactobacillus plantarum HY7714* improvements in skin hydration and elasticity, reduction in wrinkle severity in women with dry photoaged skin

**Acne** – *L. acidophilus* and *B. bifidum* used in conjunction to standard care with better clinical outcomes and compliance

**Atopic Dermatitis** - blend of probiotics and Fructooligosaccharide (FOS) clinically improved the severity of atopic dermatitis

**Psoriasis** – *Lactobacillus paracasei* had less skin sensitivity, improved skin barrier function and hydration

Topical Prebiotics, Pro- and Postbiotics

- Interfere with pathogenic bacteria
- Encourage activity and colonization of good bacteria
- Balance skin pH for thriving ecosystem
- Provide nutrients, fuel
- Strengthen skin barrier and lock in skin moisture
- Defense against environmental aggressors
- Minimize allergic and reactive skin
- Complementary treatment for chronic skin conditions, medical aesthetics and wound healing
The Skin Microbiome
The Opportunity

Challenges

• Market confusion & complexity
• Stability
• Claims - strain specificity
• Regulatory
• Testing and Labelling Standards

Opportunity

• Clinical evidence & analytics
• New platform for growing interest in personalized nutrition, medicine
• Alternative therapies for chronic skin conditions
• Lifestyle & non-toxic beauty trends
Cannabinoids & Skin Health

Through its effect on skin metabolism and inflammation, the endocannabinoid system could be an important contributor for healthy skin. From dietary to topicals, their inclusion in new products and skincare regimens could offer natural and less irritating options for sensitive, dehydrated or chronic inflammatory skin conditions.
Cannabinoids & Skin Health

The Endocannabinoid System
Bio-network consisting of sensory neurons, biochemical pathways, enzymes and receptors to support a state of homeostasis and health

Endocannabinoids
Phyto-cannabinoids
Synthetic actives
Cannabinoids & Skin Health

Cannabinoid receptors are found on cell surfaces

CB1
Receptors primarily located in the brain and nervous system

CB2
Receptors mostly found in peripheral organs and immune system
Cannabinoids & Skin Health

Food and plant chemical constituents have also been identified to stimulate, antagonize, or modulate different aspects of the ECS system.

These include common foodstuffs, herbs, spices, and more exotic ingredients: carrots, sage, black pepper, chocolate, maca, kava.

Cannabinoids & Skin Health

• Fully functional in the skin

• Regulates inflammatory and metabolic reactions to support skin homeostasis

• Shown to reduce skin inflammation and lessen hyperactive allergic responses in skin cells

**Acne** - anti-bacterial and sebum production

**Psoriasis** – controls hyper keratinization

What’s Next for Collagen?

**Plant based “collagen boosters”** hitting market due to increasing demand for clean and botanical based health & beauty products

**Keratin Peptides (the other structural protein)** making its way into beauty wellness with functional bio-available form of Keratin peptides;

*Encourages faster collagen production and skin cell growth*

*Heals aging skin cells by boosting structural collagen*

*Boosts glutathione, the master antioxidant enzyme in the body*
Lifestyle - The Stress Effect
Adaptogen Beauty

Herbs from Ayurveda and Traditional Eastern Medicine (TCM) are increasingly popular within Nutricosmetics space.

Rooted in literature and practices used for thousands of years to maximize health & longevity

Health & Body Constitution
Digestion & Bio-available
Eco-conscious & Seasonal
Lifestyle - The Stress Effect
Adaptogen Beauty

- Physical and psychological stress activate HPA axis

- “Stress responsive state” ↑ reactive hormones and pathways that interrupt immune response, stimulate inflammatory intermediates, glucose metabolism

- Impacts daily lifestyle, mood, sleep cycles and outer appearance (skin and hair)
The Stress Effect
Adaptogen Beauty

Stress-Skin Connection

Systemic effect on body tissues, (including the skin) leads to premature aging

- Dermal mast cells more reactive which may release a large number of pro-inflammatory mediators
- Stress hormones (cortisol,) hyper-stimulus effect on skin cell receptors; increasing sebum production, impairs metabolism & cellular renewal cycles
<table>
<thead>
<tr>
<th>Adaptogens</th>
<th>Help the body to adjust to and positively respond to stress by normalizing cortisol, decreasing fatigue, and improving cognition</th>
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<tbody>
<tr>
<td>Red (Panax) Ginseng Root</td>
<td>• Antioxidant, anti-inflammatory, ↑ type 1 procollagen via gene &amp; protein expression (ginsenosides)</td>
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<tr>
<td>(bio-fermented)</td>
<td>• Photo-aging, barrier function, firming, facial erythema &amp; pigmentation</td>
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<tr>
<td>Holy Basil (Ocimum tenuiflorum)</td>
<td>• Antioxidant, anti-inflammatory and microbial balancing</td>
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<tr>
<td></td>
<td>• Photo-aging, scalp and hair health</td>
</tr>
<tr>
<td>Rhodiola root (Rhodiola rosea)</td>
<td>• Acne - anti-biofilm activity against P. acnes (salidroside)</td>
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<tr>
<td></td>
<td>• Photo-aging – antioxidant polyphenols/oxidative stress</td>
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<td></td>
<td>• Hyperpigmentation – ↓ melanin synthesis and tyrosinase activity (tyrosol)</td>
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<tr>
<td>Schisandra (Shisandra chinensis)</td>
<td>• Acne - anti-biofilm activity against P. acnes</td>
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<tr>
<td></td>
<td>• Photo-aging - Suppress UVB associated stress ( ↓MMP’s, ↑Antioxidant, ↑Collagen)</td>
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<tr>
<td>Tremella (Tremella fuciformis)</td>
<td>• Anti-inflammatory &amp; Skin Barrier/TEWL - offer plant based option for animal sourced HA</td>
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The Stress Effect
Adaptogen Beauty – The Opportunity

Challenges
- Regulatory ambiguity (food or drug)
- Multiple ingredient and product forms vary in quality & efficacy (potential for dosage inconsistencies, toxicities)
- Overmarketed/simplified

Opportunity
- Ease of use - consumer loyalty & compliance (pill fatigue)
- Coincides with consumers interest in sourcing solutions for stress/lifestyle management & hectic lifestyles
- Naturally derived & rooted in traditional eastern medicine; expanding market within health & beauty brand space
- Emotional – storytelling, feel good connection
Eco-conscious & Non-Toxic
Health and Beauty

Urbanization & Lifestyle
Pollution, UVR, Blue Light, Product Chemicals & Disruptors

Modern Westernized Diet

Ecological Footprint
Plastics, Packaging, Sustainability, Farming Methods and Practices
Eco-conscious & Non-Toxic
Health and Beauty

Simplicity, Authenticity, Responsibility & Personalization

Consumers seeking pure, simple and cruelty free ingredients and products.

DIY beauty scrubs, masks, smoothies, juices, teas are becoming increasingly popular

“Euromonitor 2018 Global Beauty Survey reported almost half respondents reported using DIY beauty products at least once a month”

Health & beauty brands adopting minimalist, sustainable, ethically responsible and transparent practices

Euromonitor International’s Beauty Survey (2018)
The rise in conscious consumption approach is increasing demand for plant-derived ingredients while animal-derived ingredients are losing their popularity.

Plant derived nutricosmetic ingredients have moved into the eco-conscious beauty wellness movement.

Eco Luxe Retailers & Associations raising awareness on toxic ingredients & practices; guiding industry standards.

Euromonitor’s Top 10 Global Consumer Trends 2019; Soil Association Beauty & Wellness Report 2019;
Eco-conscious & Non-Toxic Beauty

Health & Beauty

Plant Based Health & Beauty

**Mushrooms** - bioactive compounds for health and skin condition. Anti-tyrosinase and Anti-collagenase activity

**Artichoke** – polyphenolic components offer antioxidant, anti-inflammatory, microcirculation & vasodilatation properties for skin health. Epigenetic properties delay skin aging

**Silymarin** – inhibit enzyme activity of collagenase, elastase and hyaluronidase; blocking and slowing down (photo)aging

**Rice bran** – TEWL, wrinkles associated with photoaging via the suppression of COX-2 and MMP-13 expression

Market Segmentation

- Compliance
  - Certification
  - Transparency
- Culture
- Regulation
- Science
- Acceptance
  - Price point
  - Accessibility
  - Ease of use
  - Personalization
- Education
  - How it Works
  - Results
  - Marketing
  - Packaging
- Quality of Ingredients
  - Proof of Concept
  - Endorsement

Information Classification: General
• Content Driven
• Story Telling - emotional
• Personalization – assessment
• Interaction – founders
• Authentic – real community & endorsement
• Accessibility – loyalty, purchasing
Thank You


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