The Scalp Microbiome – Changing Haircare

Rotterdam - May 2019
YOU ARE 50% BACTERIA*

- YOU - 50%
- BACTERIA - 50%

*NOT AN INSULT
RETAILERS

Harvey Nichols
Whole Foods Market
Sephora
Mecca
Urban Outfitters
Birchbox
UNIVERSITE PARIS-SUD

FACULTE DE PHARMACIE DE CHATENAY-MALABRY

ANNEE : 2014/2015

THÈSE

Présentée

A L’UNITE DE FORMATION ET DE RECHERCHE
« FACULTE DE PHARMACIE DE CHATENAY MALABRY »

de L’UNIVERSITE PARIS–SUD

Pour l’obtention du Diplôme d’Etat de

DOCTEUR EN PHARMACIE

Nom : Marie DRAGO
OUR PATENTED CORE FORMULATION - 2015

PROBIOTIC
MICRO-ORGANISM THAT IS BENEFICIAL TO US

+ PREBIOTIC
NATURAL NUTRIENT THAT HELPS THE GROWTH OF PROBIOTICS

+ LACTIC ACID
NATURALLY PRODUCED BY SOME OF OUR GOOD BACTERIA

GALLINÉE’S PATENTED TRIPLE BIOTIC COMPLEX

gallinée
THE SCALP MICROBIOME
SKIN
LUNG
GUT
ORAL-NOSE
URO-GENITAL
SKIN
LUNG
GUT
ORAL-NOSE
URO-GENITAL
POPULAR MICROBIOMES

PubMed Articles

- Gut Microbiome
- Skin Microbiome
- Vaginal Microbiome

Graph showing the number of PubMed articles published on Gut, Skin, and Vaginal Microbiome from 2006 to 2019.
UP AND COMING MICROBIOME

Search results
Items: 8

1. Folliculitis decalvans is characterized by a persistent, abnormal subepidermal microbiota.
   PMID: 30907543
   Similar articles

2. Comparison of Healthy and Dandruff Scalp Microbiome Reveals the Role of Commensals in Scalp Health.
   PMID: 30338244
   Free PMC Article
   Similar articles

3. Putting It All Together to Understand the Role of Malassezia spp. in Dandruff Etiology.
   Meray Y, Gencalp D, Gurun M.
   PMID: 29940996
   Similar articles

4. The positive benefit of Lactobacillus paracasei NCC2461 ST11 in healthy volunteers with moderate to severe dandruff.
   PMID: 2878959
SCALP MICROBIOME

• SCALP vs. SKIN
  • Thicker
  • More irrigated
  • More sebaceous glands: sebum and triglycerides
  • pH is more acidic

• Mycobiome / microbiome
  • Bacteria
    • C. acnes – neg. correlation with dandruff
    • S. epidermidis – pos. correlation
  • Yeast – Malassezia
    • M. restrictans, M. furfur, M. globosa

• Role of the scalp microbiome
  • Nutrients to hair
A NEW WAY TO LOOK AT SCALP & HAIR CONCERNS
SENSITIVE SCALP

13-43% of people self-describe as sensitive scalp - pruritus
OILY SCALP

Current solution – More washing
DANDRUFF

Antifungal/Antibacterial (Coal tar, Pyrithione zinc, Salicylic acid and sulfur, Salicylic acid, Selenium sulphide, Ketoconazole)
PSORIASIS / SEBORRHEIC DERMATITIS
Scalp bacterial shift in Alopecia areata

Daniela Pinto, Elisabetta Sorbellini, Barbara Marzani, Mariangela Rucco, Giannmaria Giuliani, Fabio Rinaldi

Published: April 11, 2019 • https://doi.org/10.1371/journal.pone.0215206
A NEW WAY TO FORMULATE HAIRCARE PRODUCTS
WHAT IS IN A BEAUTY PRODUCT

actives
WHAT IS IN A BEAUTY PRODUCT

Packaging
Perfume
Emulsifiers
Surfactants
actives
Preservatives
SPF
Colourants
Texture agents
pH
Emollients
WHAT IS IN A BEAUTY PRODUCT

- Packaging
- Perfume
- Preservatives
- Emulsifiers
  - Surfactants
- SPF
- Colourants
- Texture agents
- pH
- Emollients
Shampoo ingredients
Person 1

SLES, sodium lauryl ether sulfate.
Bouslimani 2015
HOW LONG HAVE WE BEEN WASHING OUR HAIR?

- Shampoo comes from Hindi word Champo. Saponin-containing plants were used
- 1814 - Concept introduced in Europe.
- 1903 – Powder shampoo by Schwarzkopf
- 1927 – Liquid shampoo / Soap by Schwarzkopf
- 1930 – Synthetic Shampoo by Drene
- Today – 87 billions USD Market
“I take a bath once a month whether I need it or not.”

*Queen Elizabeth*
MODERN HAIRCARE

• Routine
  • Shampoo / conditioner-mask / styling

• Consequences of overwashing
  • Rebound sebum production
  • Daily washing circle
  • Irritated / Sensitive / Itchy scalp
CHALLENGES OF DEVELOPPING SCALP MICROBIOME PRODUCTS

• Early days: Lack of published research
• Complex environment: Microbiome / Mycobiome
• Lack of specific actives / tested actives

BUT

• Enough information to start making better products and promote better routines
• pH / surfactants / excipients / hygiene habits
SCALP & HAIR CARE
SOOTHING CLEANSING CREAM

WHAT’S IN IT
- pH 4.5
- Doesn’t foam.
- With prebiotics, lactic acid, fermented rice water
- Surfactant: Coco Glucoside

RESULTS : 20/20 claims!
- Sensitive scalp indication
- Hair is clean, soft, shiny, light, greases less quickly
- Scalp is less itchy, less irritated, purified, soothed
- Allows to space the frequency of shampoos
WHAT’S IN IT
- pH 4.5
- With prebiotics, lactic acid, fermented rice water

RESULTS
- Scalp & Hair mask
- Sensitive AND oily scalp indication
  - Reduces sebum production
- User trial: 20 claims out of 20!
  - Soothing / Purifying / Repairing
  - Reduces itchiness
  - Reduces greasiness and sebum production
  - Reduces the frequency of shampoos
SCALP & HAIR SERUM

WHAT’S IN IT
- pH 4.5
- Oil-free
- With prebiotics, lactic acid, fermented rice water

RESULTS
- Leave-on or Rinse-off
- Sensitive scalp indication
- Reduces sebum production
- User trial: 20/20 claims
  Hair is shiny, luminous, detangled, light
  Scalp is soothed, purified
  Reduces frequency of shampoo

Tableau Table 2: séborrhée seborrhea

<table>
<thead>
<tr>
<th>Comparaison J28/J0</th>
<th>Séborrhée</th>
<th>Seborrhea</th>
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</thead>
<tbody>
<tr>
<td>Seuil de significativité</td>
<td>Significance threshold</td>
<td>p = 0.015</td>
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</tbody>
</table>
FIRSTS IN A NEW FIELD:
EDUCATION
A LOT OF EDUCATION
The scalp microbiome
28th February 2019

How do you really know about what’s going on on your head?

Today I’d like to talk a bit about the wonderful unexplored jungle of the scalp microbiome.

First, let’s start with some fun facts about the scalp.

The scalp is skin, and it’s even the thickest skin on your body, an average of 8mm, compared to 0.5mm for the eyelids.
It usually has around 100,000 hairs on it.
This is where hair is born, and at birth, you already have all your hair follicles ready.

50% of men over 50 are suffering from hair loss.
Personal fun fact: I was born extremely bald and stayed that way until I was two years old. My dad used to hold me in the light to see if by any chance there was any fine hair was coming up, he was quite worried. I wore a lot of hats for a baby...

The environment of the scalp is quite different from other skin sites. If you think of your body as a planet, the arms and legs would be dry savanna, your armpits dark humid caves and the scalp would be a tropical forest. Because of its humid environment and rich sebum, you will find there a very different microbiome.

The first thing to note is the presence of a lot of yeasts, especially from the Malassezia family. In this club you will see M. restrictans, M. furfur (cool name!), M. globosa, the latest one being responsible for dandruff and seborrheic dermatitis when it gets out of control.
These yeast feed from fat and live very happily on your scalp from all the sebum.

These fungi collaborate with the bacteria neighbours. On the bacteria side, you will find common skin bacteria such as C. acnes and S. epidermidis, but also local people who seem to synthesise vitamins and nutrients essential for
Get the clean hold the foam
28th February 2019

Most of us use shampoo every other day, and it’s a staple of any bathroom in the world.

But have you ever wondered where is shampoo coming from? I really started to look into it only when we decided to create a Gallinée scalp care range.

The first commercial shampoo was from a certain Mr Schwarzkopf in 1903. Compare this to the 5000-year-old soap, or the 4000-year-old Kohl, shampoo has barely been here for 100 years!
Yao women’s secret: fermented rice water

27th March 2019

I would like to make you discover our latest wonder ingredient: fermented rice water. I have been obsessed with it since I read an article years ago about a village in China where Yao women have the most incredible hair, and often don’t have grey hair until their 80s. See for yourself.

Their secret? They just wash their hair with the cooking water from rice, that has been left to ferment a few days in the open air. Since then I have been sourcing the ingredient and creating our whole scalp care range around it.
“These products are helping me break the daily hair wash cycle”

Gallinée’s Hair-Raising Revolution

Enfin du « vrai » skincare pour le cuir chevelu

Gallinée’s scalp care launch in the skin microbiome space
CONSUMING LESS:
IS YOUR PRODUCT BETTER THAN NO PRODUCT AT ALL?

MINIMALISM:
SMALLER INCI & SIMPLER ROUTINES = LESS POTENTIAL MICROBIOME INTERFERENCE
MERCI !

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