THINNING HAIR: 30 MILLION WOMEN
HAIR LOSS = DISTURBING, EMOTIONAL STRESS, LOSS OF SELF-CONFIDENCE
THINNING HAIR:
AT THE AGE OF 50
85% OF MEN
A huge amount of potential customers

30 million American women have thinning hair

At the age of 35, two thirds of American men will experience a certain degree of noticeable hair loss.

At the age of 50, approximately 85% of men have significantly thinning hair.
HAIR BOOSTER BY

THE SOLUTION FOR NON-DISEASE-RELATED HAIR LOSS

HAIR BOOSTER BY

HAIR CARE WITH MEDICAL COMPETENCE
DERMOCEUTICAL HAIR CARE

Interdisciplinary according to the latest findings:

- DERMATOLOGY
- COSMETICS
- PHYTOPHARMACY
- BIOTECHNOLOGY

SPECIAL CARE COMING CLOSER TO MEDICINE
THE ACTIVATION OF HAIR GROWTH

BIODROGA MD™ HAIR BOOSTER

SCALP CLEANSING CONCENTRATE

ENERGIZING SERUM
THE FREQUENT CAUSE OF HAIR LOSS

- Is an **age-dependent**, degenerative, immunological and inflammatory process.
- **Vitamine and nutrient deficiencies** are frequently associated, e.g. Vitamin D3 or Vitamin B.
- More recently, scientific data demonstrate **changes in molecular pathways** that are essential for hair follicle formation and morphology.

- Specifically, hair follicle stem cells lose their physiological regeneration potential.
- Proinflammatory Prostaglandin D2 and other mastcell-derived serinases **cause changes** in hair follicle functioning and consequently causing hair loss.
THE FREQUENT CAUSE OF HAIR LOSS

• The multifactorial underlying pathophysiology of hair loss is suggested to be mainly and essentially caused by lack or loss of certain signaling peptides.

• This leads to reduced self-renewal capacity of follicles and epithelium, recognized in reduced follicle-size, hair loss and inflammation of the scalp.
Thymic peptides occur naturally in the body:

- They are formed in the thymus gland which controls the body’s vital energy.

- The triggering effect of thymic peptides stimulates physiological processes that have an impact on the appearance of skin and hair.
PEPTIDES STPL II –
THE KEY TO OUR IMMUNE SYSTEM

• Low-molecular, tetra-peptides are important signaling peptides for physiological functioning of cells and tissues (e.g. hair follicle, epidermis) as well as the immune system.

• There is an age-dependent decrease of such regulating signaling peptides.

• COPIED FROM NATURE: STPL II

• Synthesized from natural, plant derived amino acids.

• STPL2 is a synthetic, nature-identical tetra-peptide complex, which reconstitutes normal cell physiology and hair growth cycles.
1. Anti-hair-loss effect
Inflammatory mechanisms, including mast-cell activity (PG D2, serinases, tryptase) are inhibited.

2. Hair-growth stimulating
Follicle stem cells are activated.

3. Phase shifting
The anagen phase (growth phase) of the hair is prolonged.

4. Disinfection
Scalp and hairline are thoroughly cleansed.

5. Conditioning effect
Hair structure and quality are improved. The scalp is revitalized.

6. Anti-dandruff effect
The epithelial functions of the scalp are improved.
1. Anti-hair-loss effect

Inflammatory mechanisms and mast-cell activity are inhibited.

STPL II normalizes the causes responsible for the loss hair follicle and the epithelial cell function.

- Inhibition of mast cells effects, e.g. serinases, trypase, PG D2, proinflammatory mediators
- Stimulation and activation of follicle-adjacent stem cells
- There is evidence that mast cells derived inflammatory mediators play an essential role in hair loss
- DHT-binding androgen receptors, a pathophysiological co-factor, are masked by free amino acids

Mast cell produced PG D2, serine proteases, tryptase and trypsin are significantly inhibited by STPL2.
STPL2 signaling peptides modulate hair stem cell function.
Since the hair follicle undergoes cycles of degeneration and regeneration throughout life, it has been assumed that hair follicle growth is controlled by stem cells. Currently, the best characterized hair follicle stem cell population is the bulge stem cell which resides in a discrete microenvironment called the bulge. Bulge stem cells have the capacity to differentiate into all epithelial components of the hair follicle, and also participate in the repair of the skin. The ability to stimulate human hair follicle bulge stem cells offers fascinating therapeutic potential for alopecia as well as for epithelial tissue regeneration.

2. Hair-growth stimulating

Follicle stem cells are activated

STPL II vitalizes the physiological function of the hair follicle. New hair growth is stimulated.
3. Phase shifting

Due to the extension of the anagen phase (growth phase) of the hair, the longevity of hair is prolonged.

PILOT STUDY OF THE DERMATOLOGICAL CLINIC IN DARMSTADT,

Extension of the anagen phase:
Front of head 40%
Back of head 43%
4. Disinfection

The influence of disturbing environmental factors may also be responsible for hair loss.

The Energizing Serum contains 30% alcohol. Alcohol has a disinfecting effect so that germs which have a negative influence on hair and scalp can be reduced.
The PEPTIDES STPL II improve the natural conditions for hair growth, they optimize the hair volume and strengthen its structure and texture. Caffeine improves the circulation of the scalp and protects the hair roots. Vitamin E acetate builds up the hair structure and has an antioxidative effect against free radicals. Biotin improves the hair growth.

Panthenol provides the scalp with valuable moisture and has soothing properties. Lecithin conditions hair and scalp. Black oat extract envelops the hair with an invisible, protecting film, cements damaged areas and protects hair against moisture loss. Wheat protein provides for supple hair, giving it strength.
6. Anti-dandruff effect

The functions of the scalp are improved

- Dandruff frequently is a co-factor in hair loss
- It is characterized by dry skin, reduced epithelial vitality, inflammation leading to redness and pruritus (itching) – basically reduced epithelial cell biology (-specifically keratinocytes) and skin irritation
- Often associated with an epithelial scalp yeast infection and reduced epithelial cell metabolism
- STPL2 in its unique formulation counteracts all these factors and
- Disinfects the scalp
- Inhibits inflammation
- Vitalizes epithelial cells and
- Normalizes skin physiology
HAIR BOOSTER – THE APPLICATION

In combination

Scalp Cleansing Concentrate & Energizing Serum

Important: For a visible effect, use at least 3 to 6 months daily.

The effectiveness will be optimized if both products are used!

Approx. 45% of the peptides reach the hair follicle.
HAIR BOOSTER – TO USE

**Dosage (on the entire scalp):**

**STEP 1**

*Shampoo Concentrate, 75ml – 2 months supply*

Apply approx. 1,5ml Shampoo Concentrate (pump 2 times) with the finger tips to the scalp. Wash and massage in for 1 minute. Rinse off thoroughly.

**STEP 2**

*Energizing Serum, 100ml – 2 months supply*

Apply 1,5 ml Energizing Serum (1 plunger action = approx 0,5ml) with the finger tips to the scalp and massage in thoroughly. Do not rinse. Then style as usual.

Adapt volume of Energizing Serum for local areas of hair loss.
SCIENTIFIC PROOF OF STPL II

BIOandroga MD
Pull-test after 180 days of treatment: 4 levels of improvement

**MEN**
- 2% POOR
- 16% FAIR
- 23% EXCELLENT
- 59% GOOD

**WOMEN**
- 1% POOR
- 8% FAIR
- 36% EXCELLENT
- 55% GOOD

**SCIENTIFIC PROOF OF STPL II**

M- Barbareschi et al; 2011

**Six-month study with 337 test persons** (male and female):
Pull test men with androgenetic hair loss: 95% effectiveness
Pull test women androgenetic hair loss: 98% effectiveness

**Biodroga MD™**
Study University Clinic of Heidelberg, Gynecology Department, and Municipal Clinics of Darmstadt, Dermatology Department.

Publication “Neue Ansätze in Diagnostik und Therapie der Alopecie in der Gynäkologie” - New approaches in diagnostics and therapy of alopecia in gynecology (Therapeutische Umschau, Band 47, 1990, Heft 12)

EFFECTIVENESS OF STPL II AFTER THERAPY TIME
STUDY IN CANCER PATIENTS DURING THE CHEMOTHERAPY

No or very little hair loss: 41-81% of patients

JOURNAL OF PLASTIC DERMATOLOGY, 2009
6-month study, 115 women with telogen effluvium (average age: 40 years)
Pull-test 88% total effective
Comparative test of the effectiveness of different ingredients:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Effect After 6 Months</th>
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<tbody>
<tr>
<td>STPL2</td>
<td>73% (19/26)</td>
</tr>
<tr>
<td>Spironolacton</td>
<td>33% (5/15)</td>
</tr>
<tr>
<td>Cyproteronacetate</td>
<td>40% (4/10)</td>
</tr>
<tr>
<td>Minoxidil</td>
<td>40% (4/10)</td>
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</table>
EFFECTS OF TOPICAL TREATMENT WITH STPL II

Before and after 3 months of treatment

Before and after 6 months of treatment
COMPETITORS HAIR BOOSTER
The concept

Products with caffeine complex (Plantur, Alpecin)
• counteract the negative effect of testosterone

Effect of testosterone:
• impedes the energy supply of the hair root
• shortens the active growth phase of the hair
• leads to increased hair loss
Minoxidil (z.B. Rogaine):

• was originally used as a high blood pressure medication
• It is a nitric oxide agonist which dilates blood vessels and activates the enzyme Guanylate cyclase
• The expectation is that the blood circulation at the hair follicle would be improved

Result: Stimulation of hair functions

• is mainly used at hereditary hair loss
Nioxin

- Does not stimulate hair growth, but increases the health of the scalp and improves the condition of the existing hair
- The blood circulation of the scalp is stimulated - amino acids are supplied to strengthen the hair

Ingredients:
- Biotin
- Amino acids
- Ginseng Extract
- Saw Palmetto Extract
- Nettle root extract
- Classical Ayurvedic ingredients are combined with amino acids
The concept

Basis of the product: **Stemoxidine**

- Stemoxidine = Molecule, which controls the supply of oxygen at the hair follicle
- The assumption of the scientists is that by reducing the supply of oxygen the hair follicles could be stimulated
- By reducing the oxygen supply the hair follicles could be "awakened".
## COMPETITORS HAIR GROWTH SERUM

### VICHY

<table>
<thead>
<tr>
<th>Product</th>
<th>Quantity</th>
<th>Price</th>
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<tbody>
<tr>
<td>Vichy Dercos</td>
<td>28x6 ml</td>
<td>75,00 €*</td>
</tr>
<tr>
<td>Neogenic, 1-month-supply</td>
<td></td>
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</table>

### ROGAINE

<table>
<thead>
<tr>
<th>Product</th>
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<tbody>
<tr>
<td>Topical Solution</td>
<td>3x60ml</td>
<td>67,50 €*</td>
</tr>
<tr>
<td>3-month-supply</td>
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</table>

### BIODROGA MD

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<thead>
<tr>
<th>Product</th>
<th>Quantity</th>
<th>Price</th>
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<tbody>
<tr>
<td>Energizing Serum</td>
<td>100ml</td>
<td>98,00 €*</td>
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<tr>
<td>2-months supply</td>
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<td></td>
</tr>
</tbody>
</table>

*recommended retail price

Germany
NEW DESIGN: BIODROGA MD HAIR BOOSTER
Shampoo Concentrate

A new formulation:

More care for smooth, shiny hair!
NEW FORMULA

Shampoo Concentrate, 75ml, 2 month supply € 39,-*

Energizing Serum, 100ml, 2 month supply € 98,-*

* Recommended retail price Germany
NO LIMITATIONS:
No negative interaction between the Hair Booster products and any hair color and styling products.
HAIR CARE
WHICH TOUCHES
THANK YOU FOR YOUR ATTENTION!