



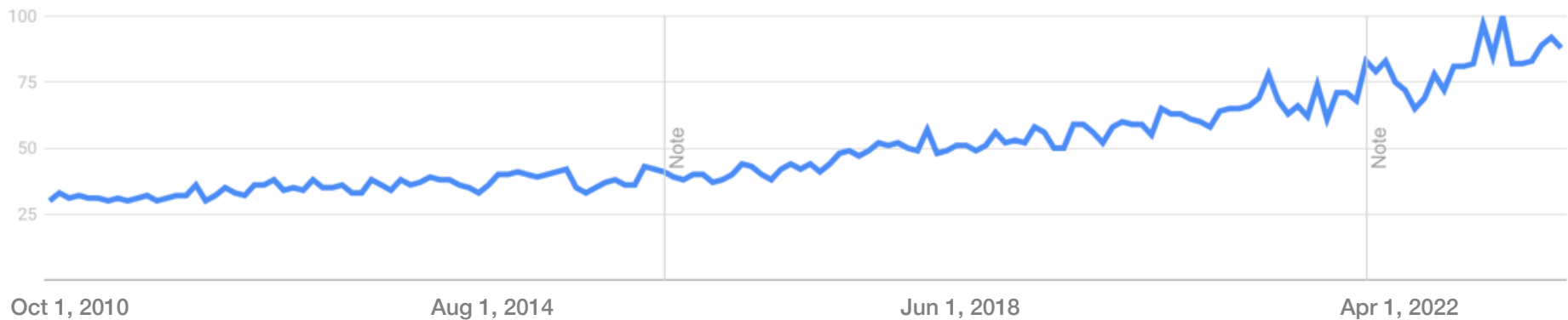
## **OVERVIEW OF SCALP CARE**

**Jeni Thomas, Ph.D.**

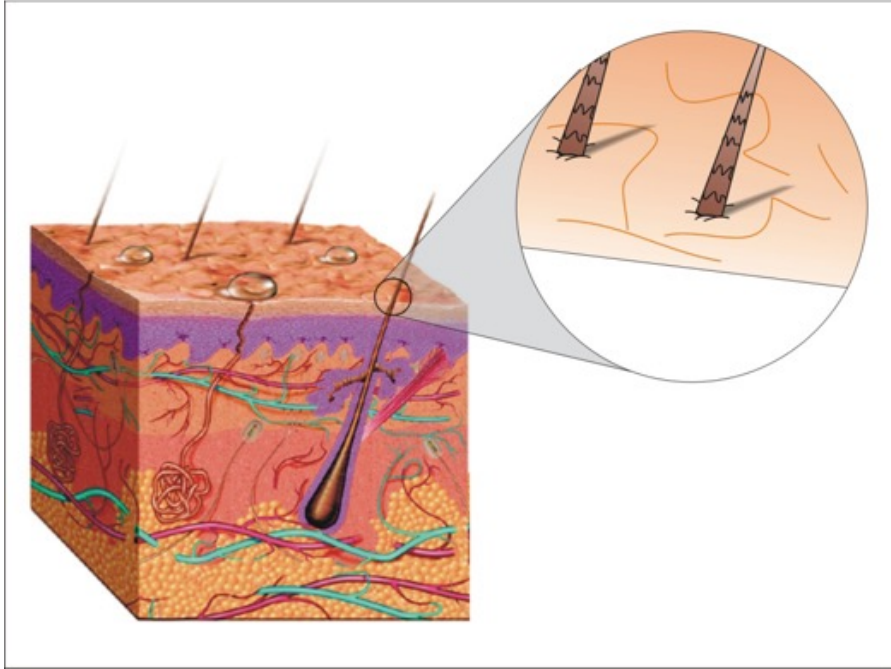
**P&G BEAUTY GLOBAL SCIENCE COMMUNICATIONS**

# Google Trends

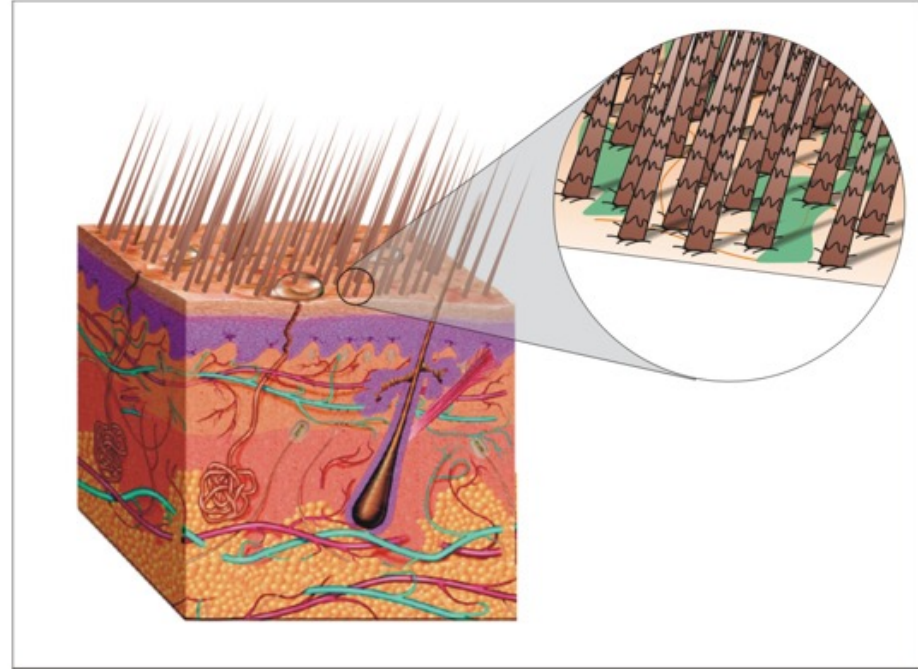
● scalp treatment  
Search term



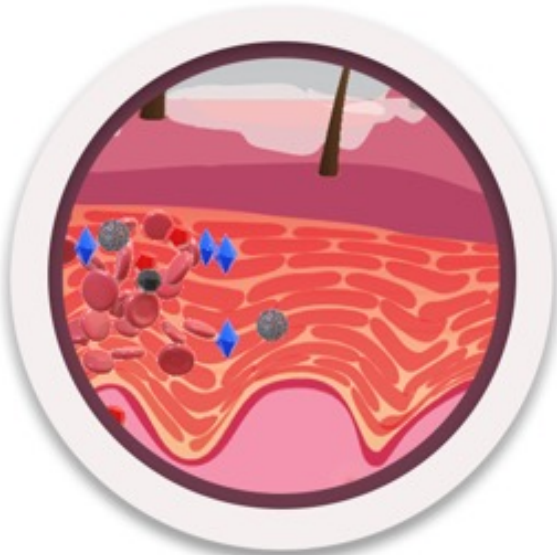
**BODY SKIN**



**SCALP SKIN**



# SCALP HEALTH SPECTRUM



**SYMPTOMATIC  
SCALP**

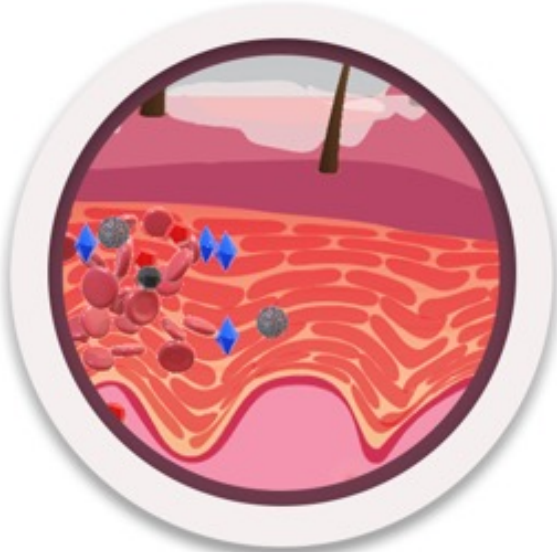


**ASYMPTOMATIC  
SCALP**

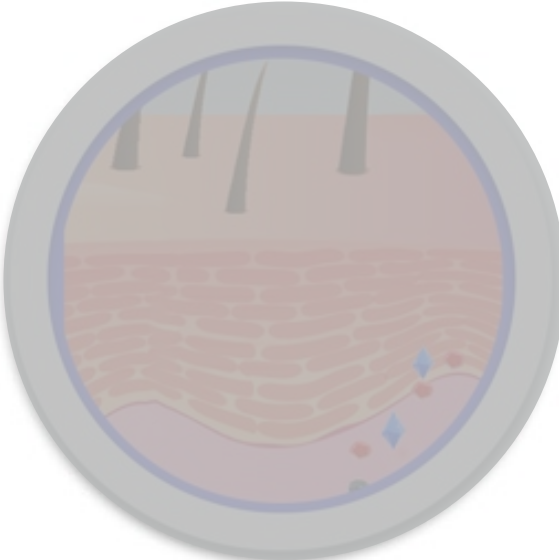


**OPTIMAL  
SCALP**

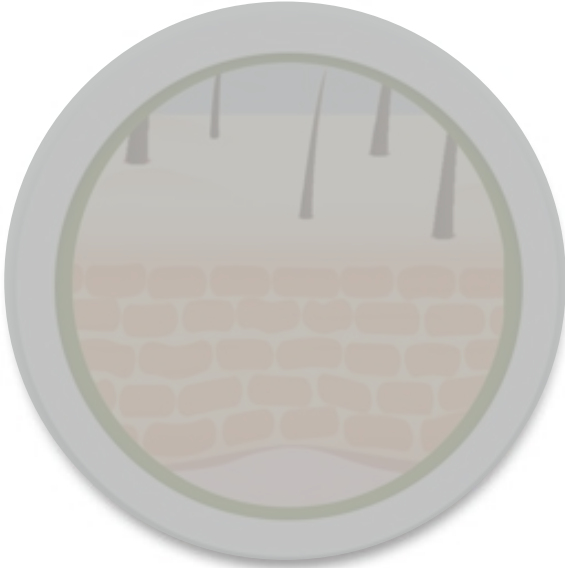
# SCALP HEALTH SPECTRUM



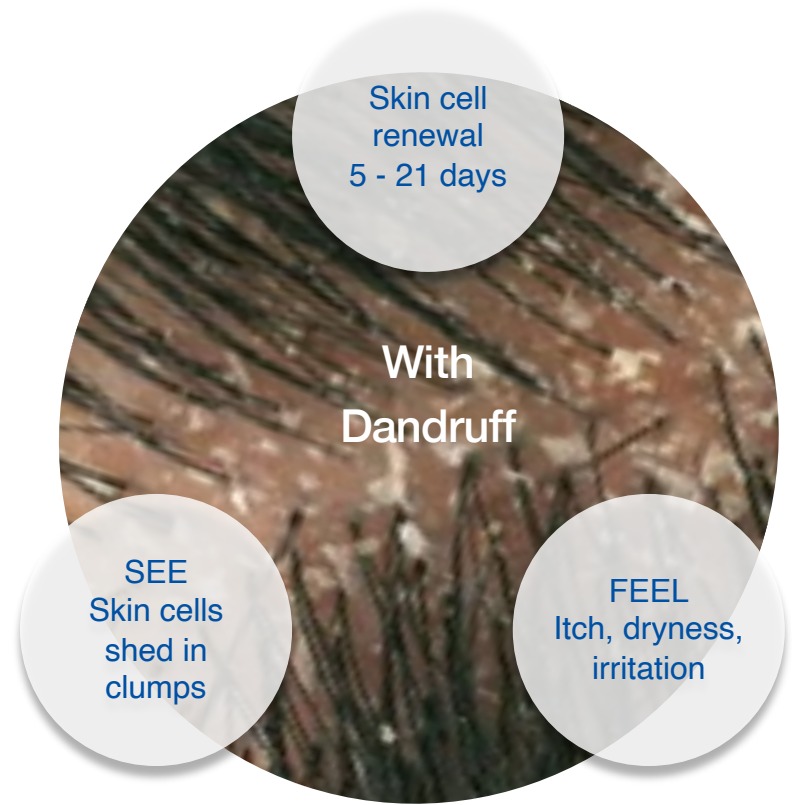
**SYMPTOMATIC  
SCALP**

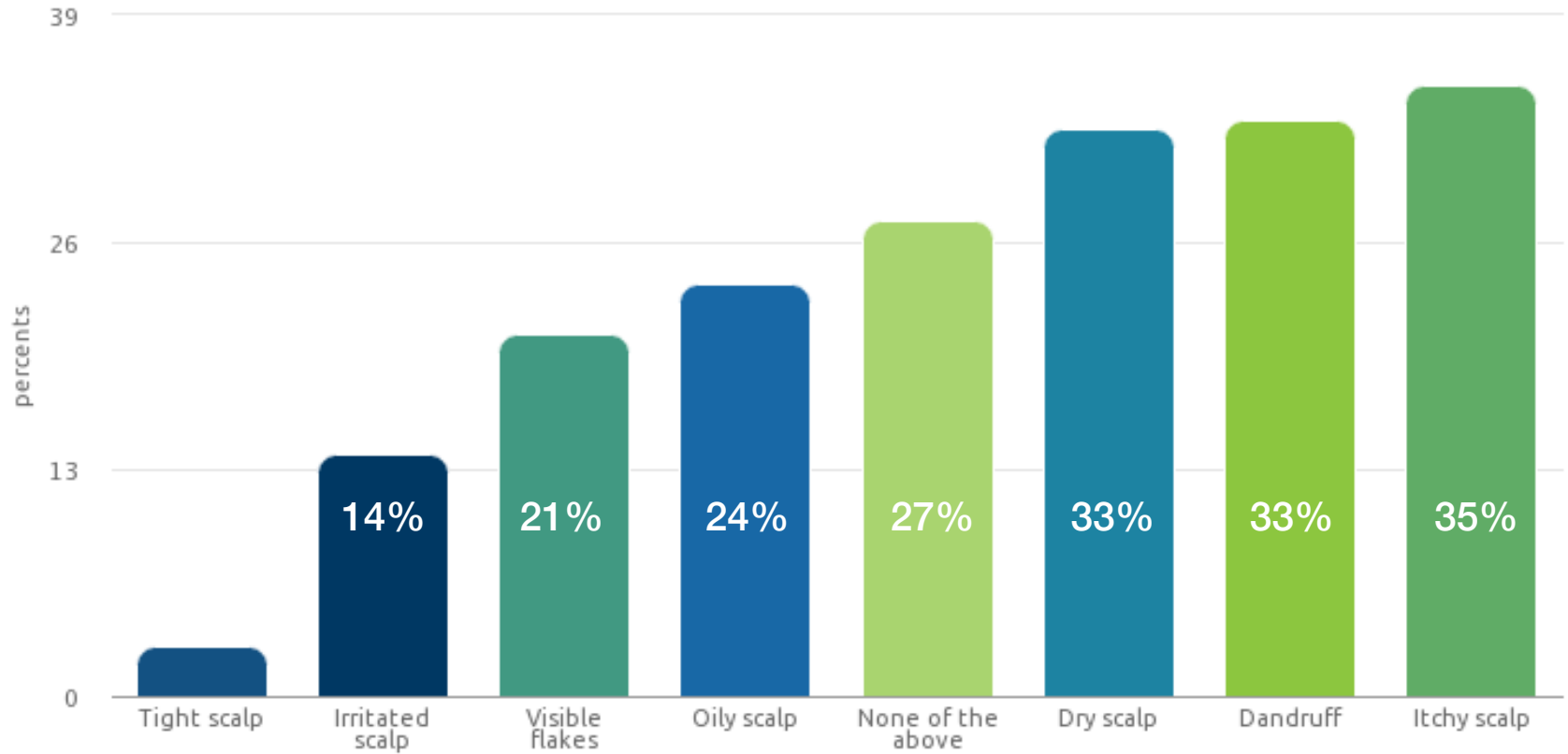


**ASYMPTOMATIC  
SCALP**



**OPTIMAL  
SCALP**





*“What, if any, concerns do you have about your scalp?”*  
*Online survey, June 2022, among 1800 women & men in the US, ages 18-50*

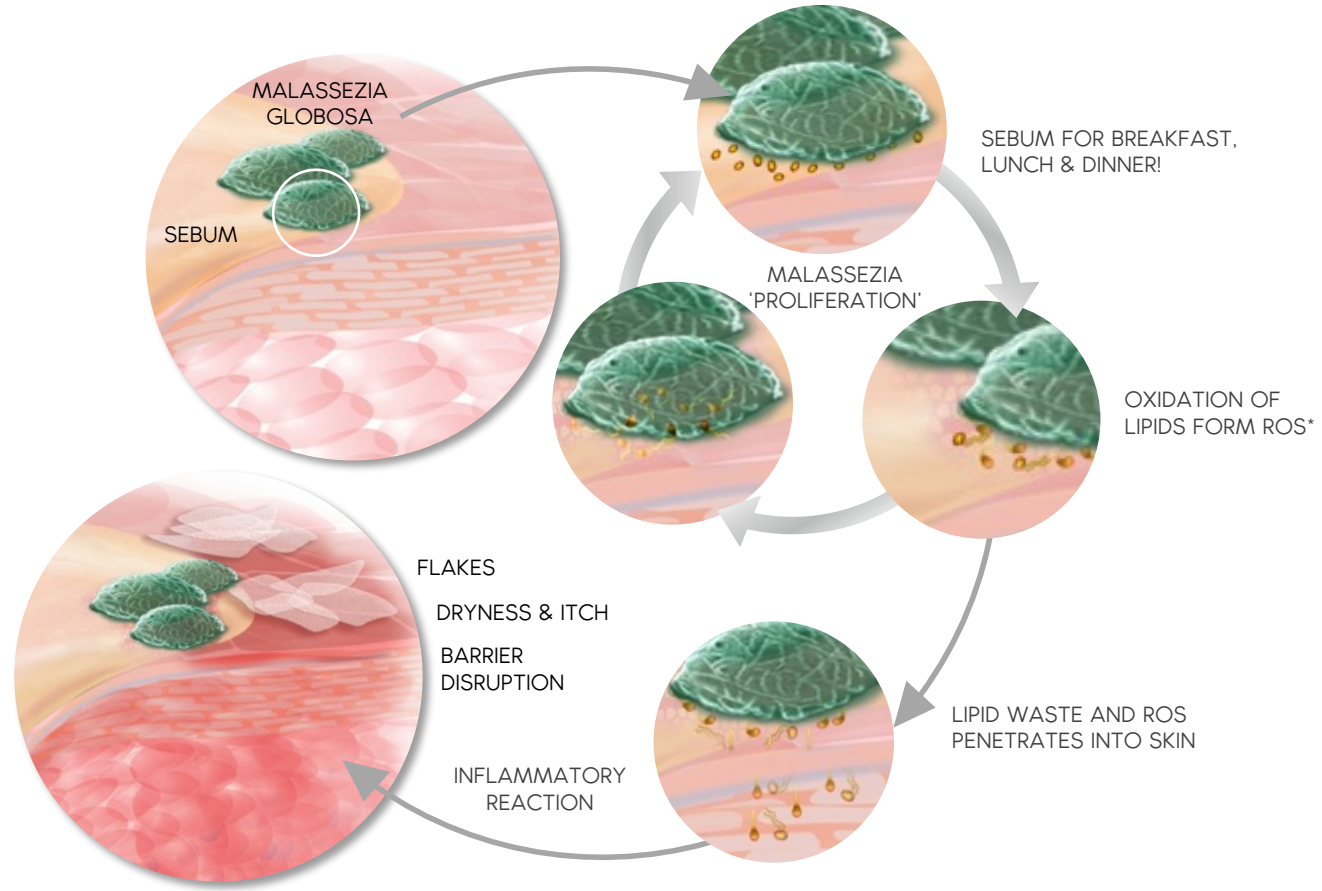
**Scalp Microbiome**  
*(Malassezia globosa)*



**Individual  
Susceptibility**

**Scalp  
Oils**





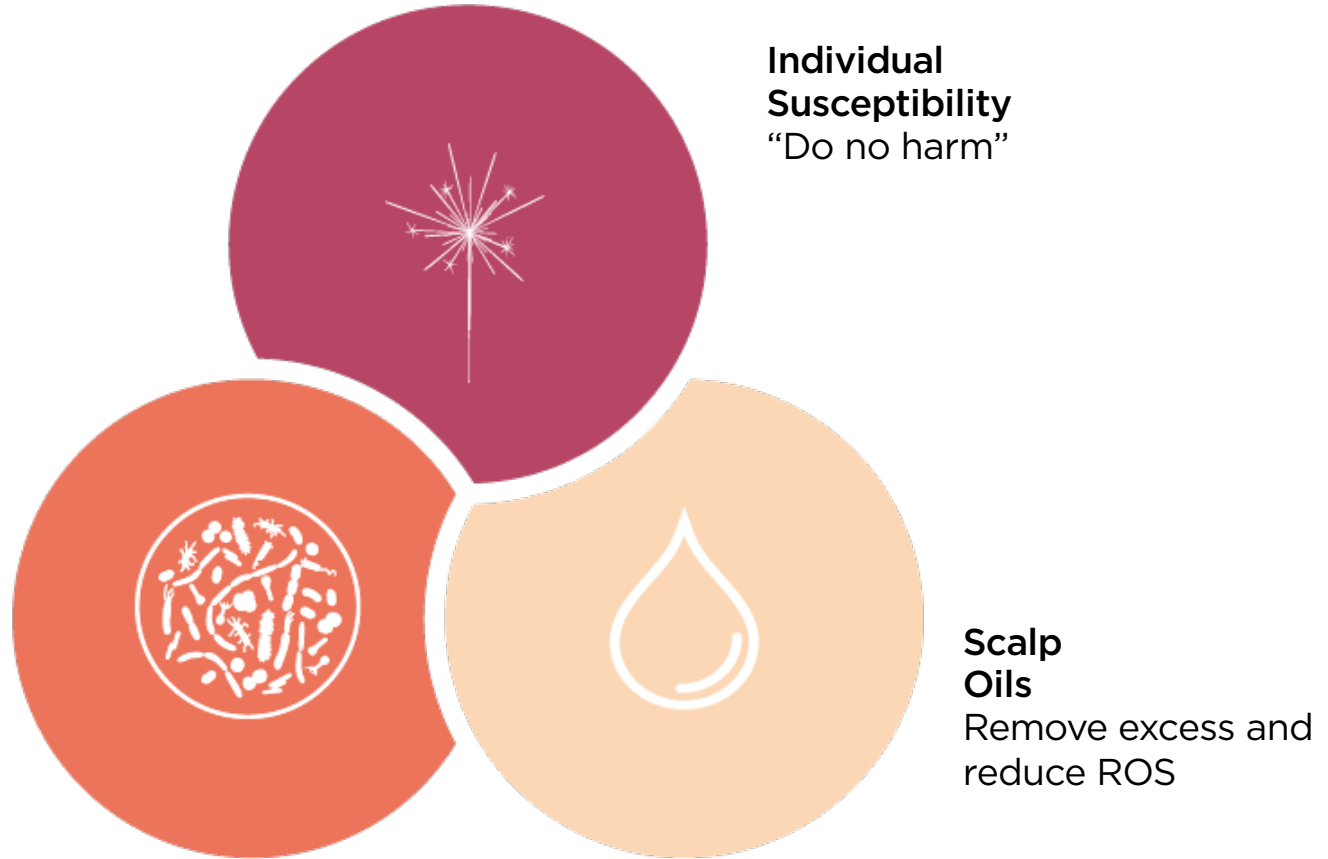
Xu J, et al. Dandruff-associated Malassezia genomes reveal convergent and divergent virulence traits shared with plant and human fungal pathogens. *PNAS*. 2007;104 (47):18730-5;

Dawson TL Jr. Malassezia globosa and restricta: breakthrough understanding of the etiology and treatment of dandruff and seborrheic dermatitis through whole-genome analysis. *J Investig Dermatol Symp Proc*. 2007;12(2):15-9.

WHAT TO DO?



# CARE APPROACHES



# CARE APPROACHES

**Scalp  
Microbiome**  
Return and  
maintain balance



























# Scalp Care Considerations

Return & Maintain Microbiome Balance



## Overview of Commercial Anti-Dandruff Actives

	Global (FDA-monographed)					Regional (or NDA)		
	Zinc Pyrithione	Selenium Sulfide	Sulfur	Salicylic Acid	Coal Tar	Ketoconazole	Climbazole	Piroctone Olamine
Appearance								
Efficacy against <i>Malassezia globosa</i>								
Cosmetic Properties								

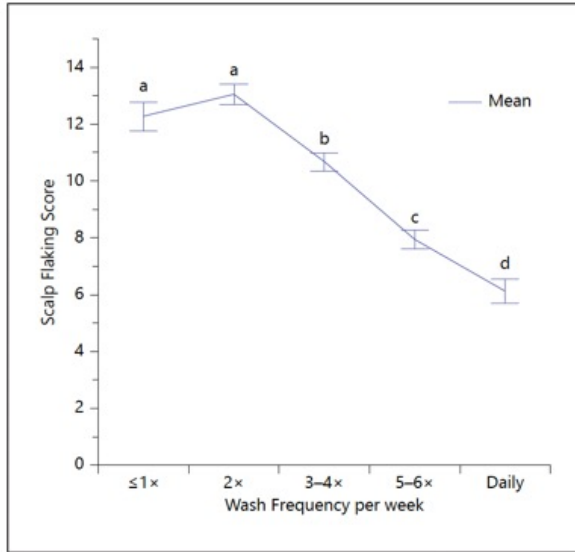
# CARE APPROACHES



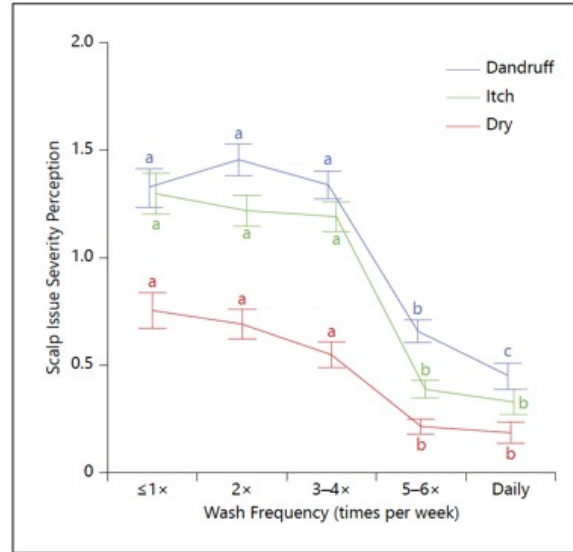
**Scalp  
Oils**  
Remove excess and  
reduce ROS

# Scalp Care Considerations

Remove excess sebum & reduce ROS

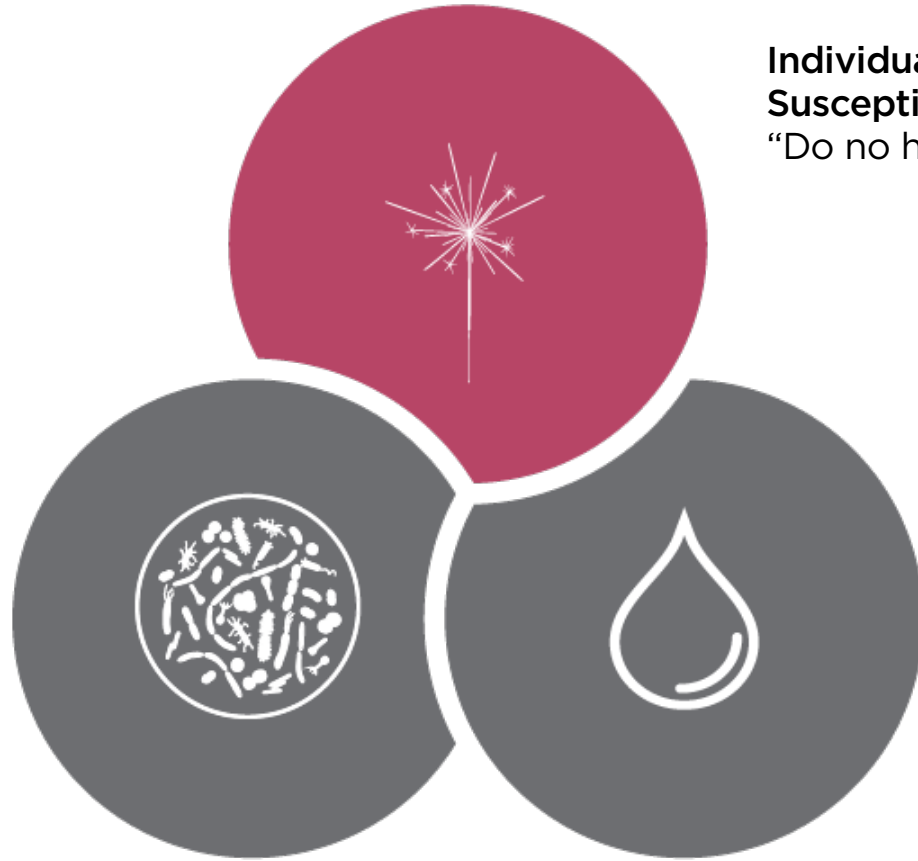


**Fig. 2.** Scalp Flaking Score graded by experts as function of wash frequency in epidemiological study. The mean ASFS is plotted with standard error bars. Results not connected by same letter are significantly different. ASFS, Adherent Scalp Flaking Score.



**Fig. 3.** Self-perceived scalp parameters dandruff, itch, and dryness of  $n = 1,500$  males and females as function of wash frequency in the epidemiological study. The mean is plotted with standard error bars. Results not connected by same letter are significantly different.

# CARE APPROACHES



**Individual  
Susceptibility**  
“Do no harm”





# Scalp Care Considerations

“Do no harm” with mild scalp cleansing  
enabled by micelles & co-surfactants

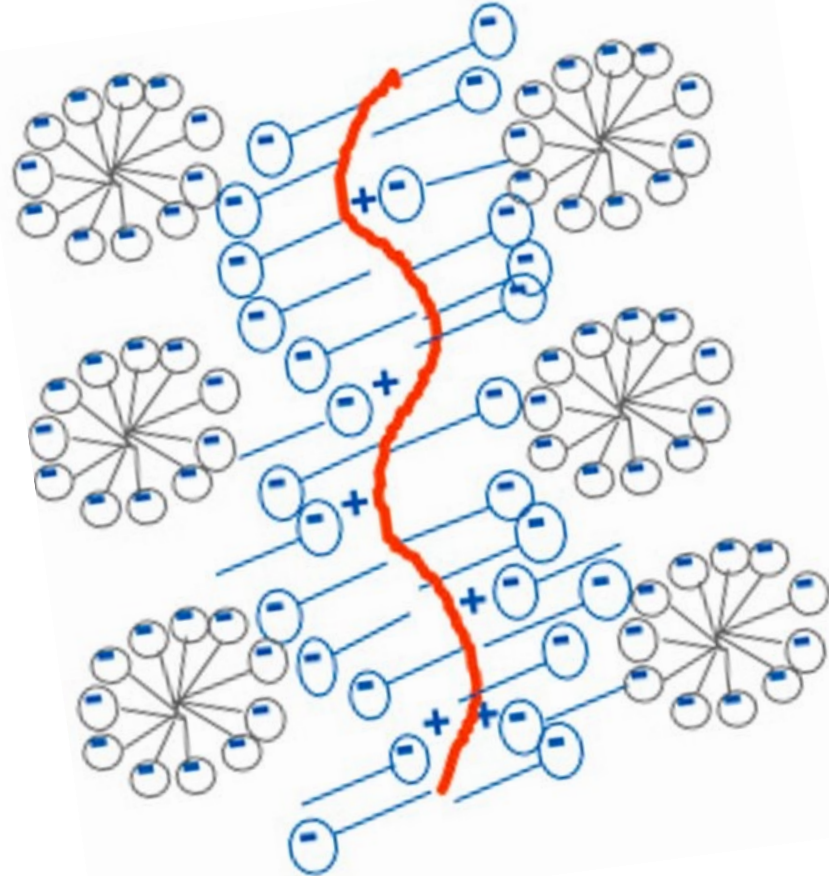


# Scalp Care Considerations

“Do no harm” with mild scalp cleansing

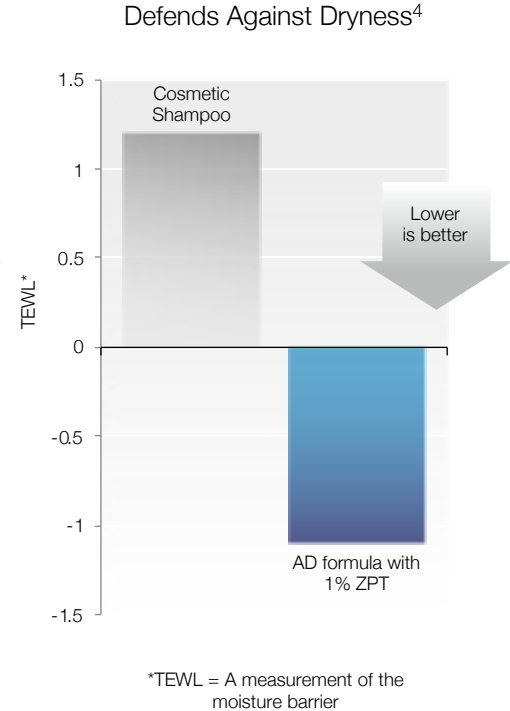
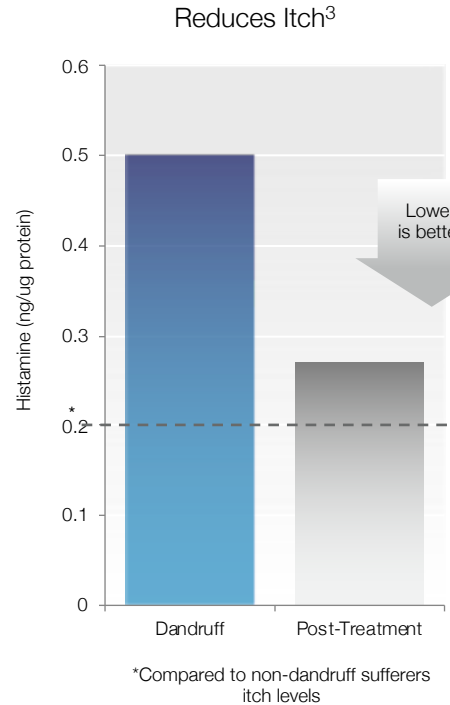
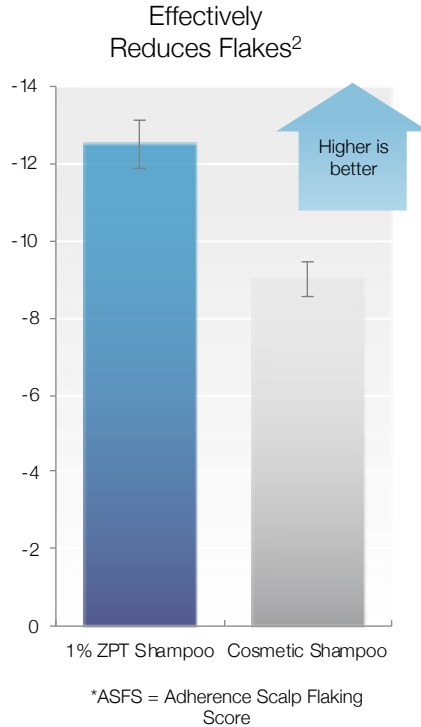
Coacervate network is dual purpose:

- 1) Delivers active ingredients
- 2) Conditions hair

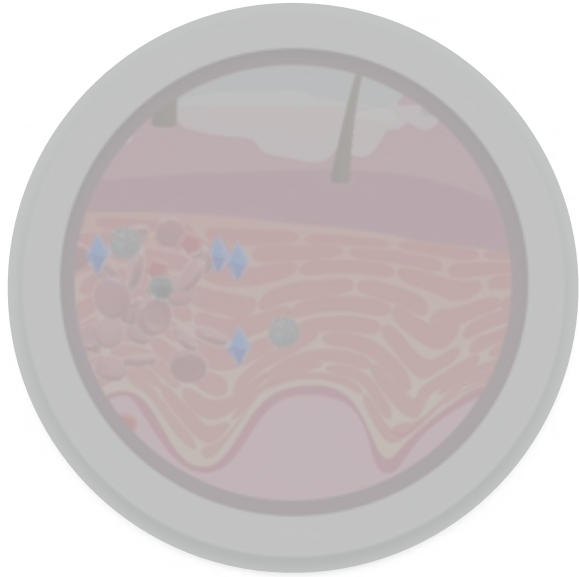




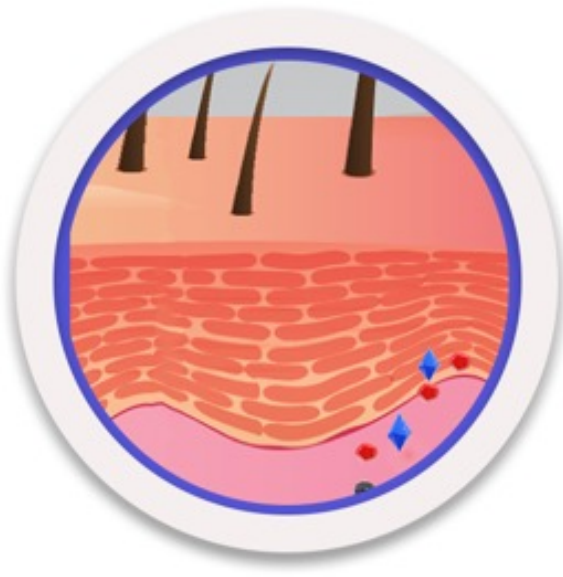
Clinical studies show scalp care shampoo with zinc pyrithione reduces flakes and itch while improving scalp skin's moisture barrier.



1. World Congress of Dermatology Survey. 23rd World Congress of Dermatology, Canada, Vancouver, BC, 8–13 June 2015. Data on file;
2. Kerr K, et al. Epidermal Changes Associated with Symptomatic Resolution of Dandruff Biomarkers of Scalp Health. *Int J Dermatol.* 2011;50(1):102–13;
3. Kerr K, et al. Scalp Stratum Corneum Histamine Levels: Novel Sampling Method Reveals Association with Itch Resolution in Dandruff/Seborrheic Dermatitis Treatment. *Acta Derm Venereol.* 2011;91:404–8; 4. P&G. Data on file.



**SYMPTOMATIC  
SCALP**

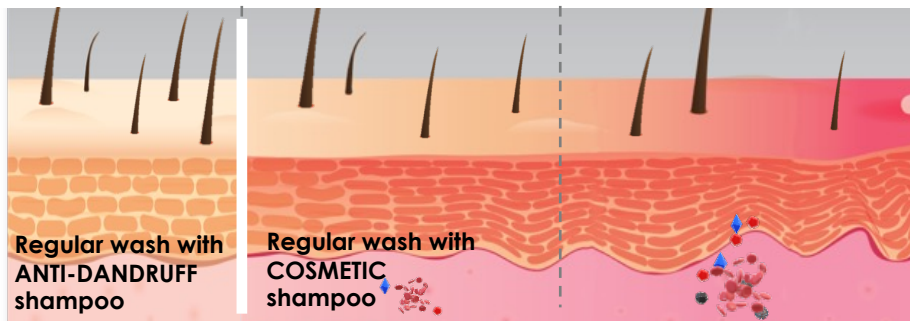
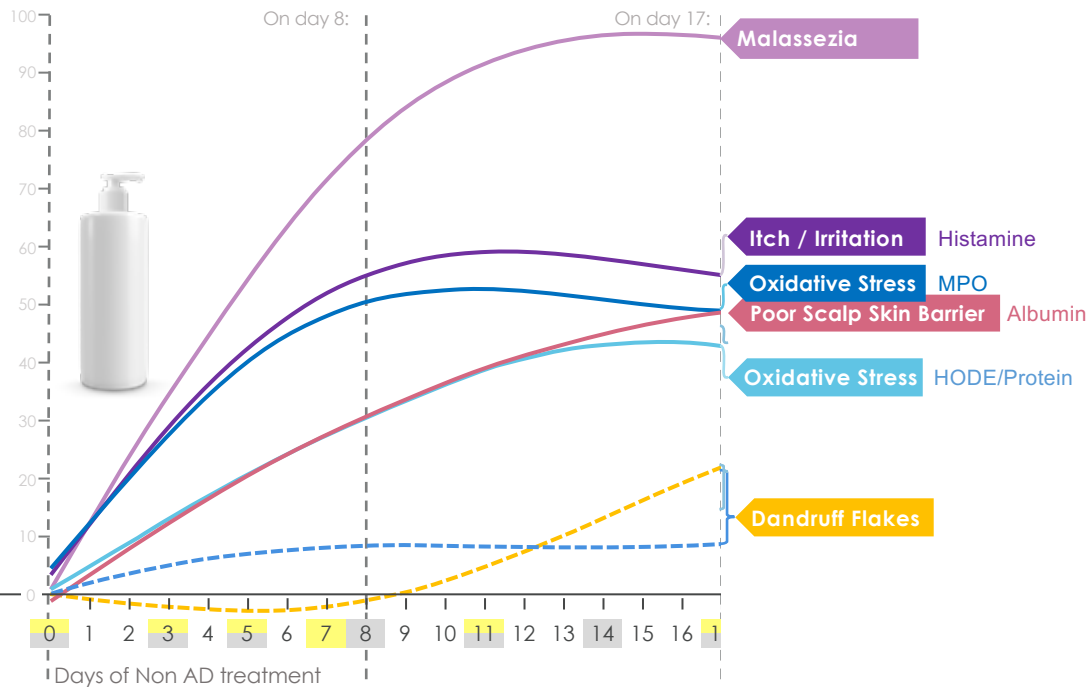


**ASYMPTOMATIC  
SCALP**



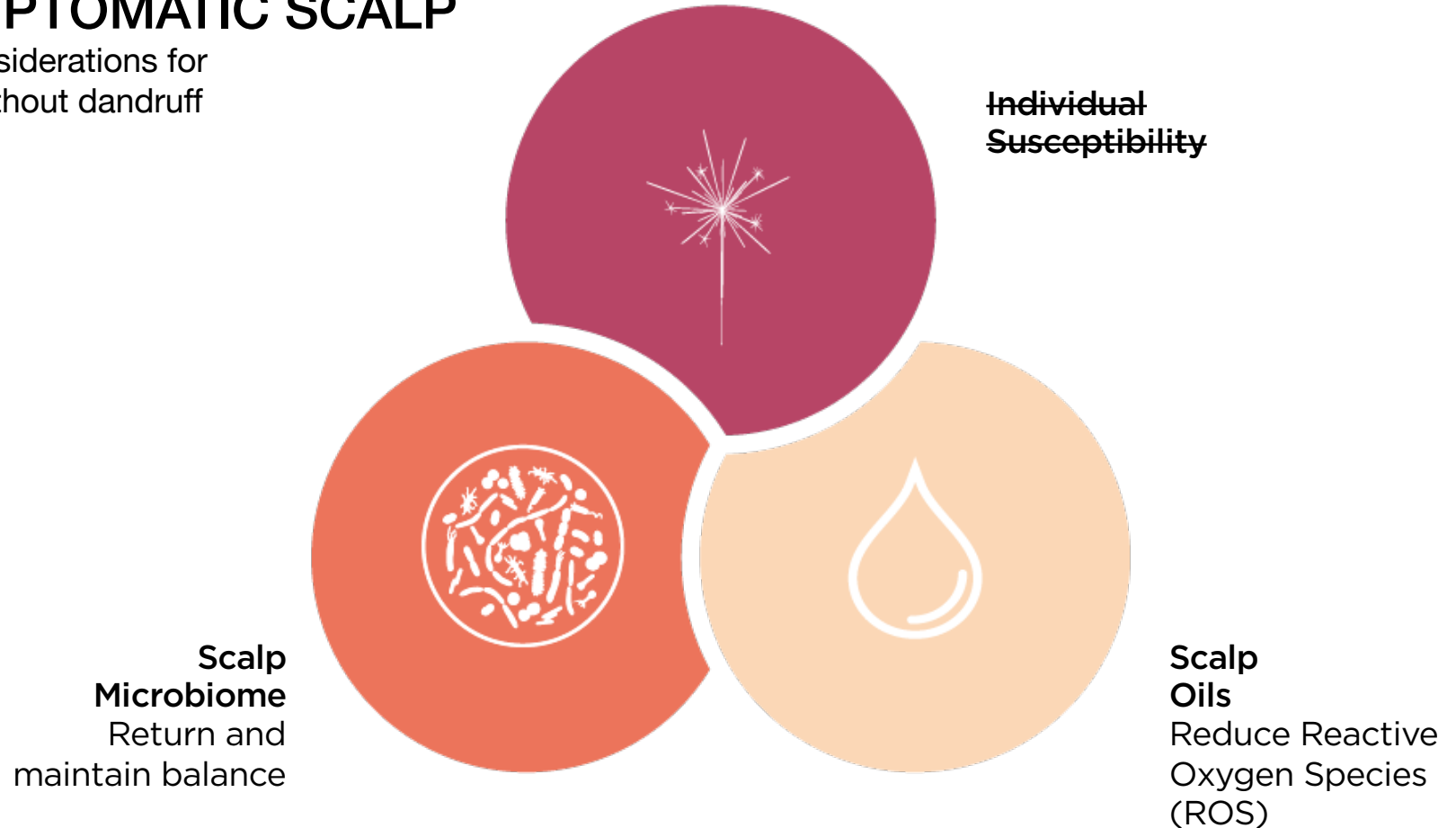
**OPTIMAL  
SCALP**

# % Changes from anti-dandruff treatment phase



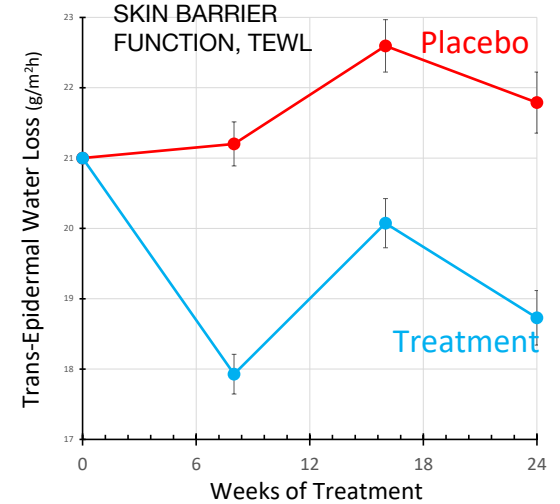
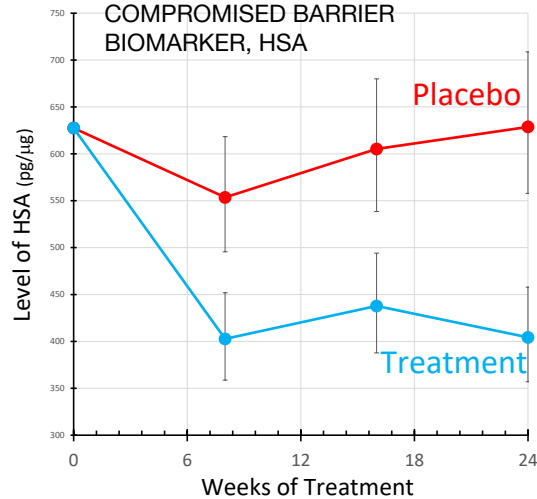
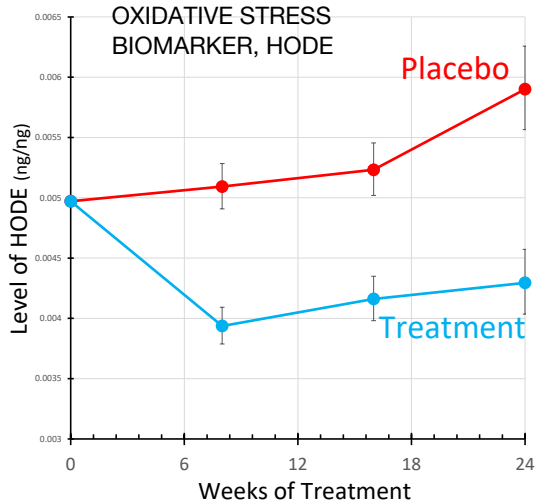
# ASYMPTOMATIC SCALP

Care Considerations for  
scalps without dandruff



# ASYMPTOMATIC SCALP

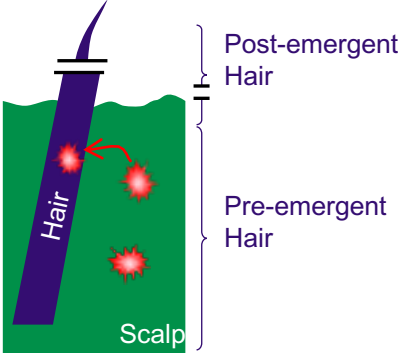
Care Considerations for  
scalps without dandruff



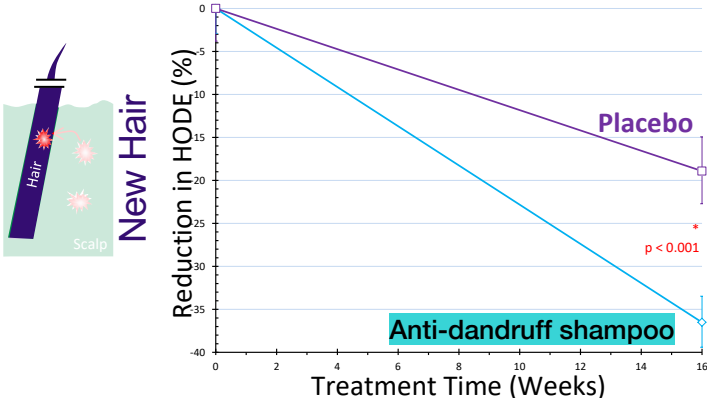
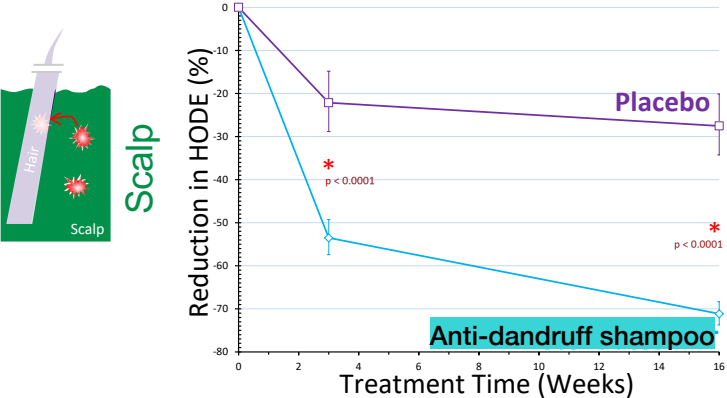
# ASYMPTOMATIC SCALP

Care Considerations for scalps without dandruff

Scalp oxidative stress can be transmitted to the pre-emergent hair

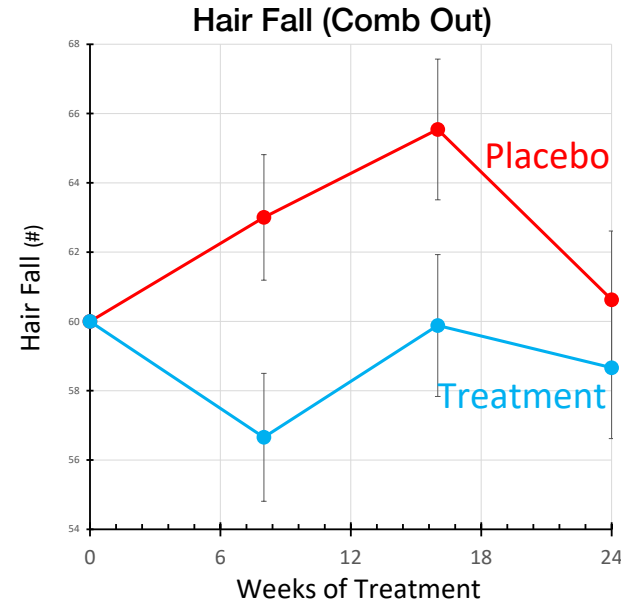
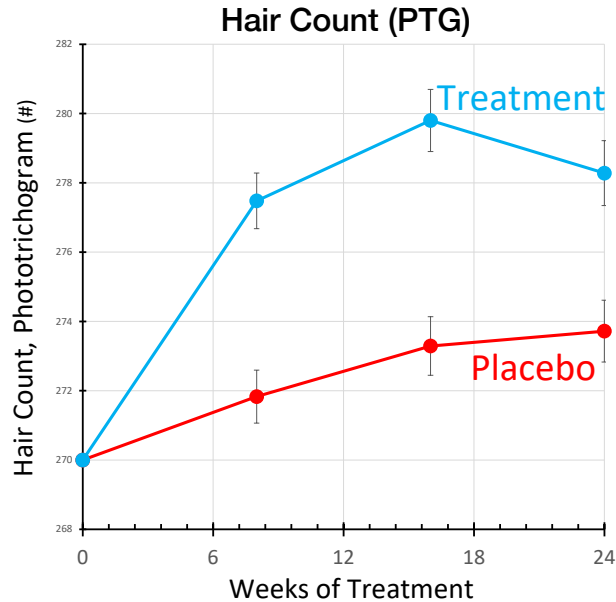
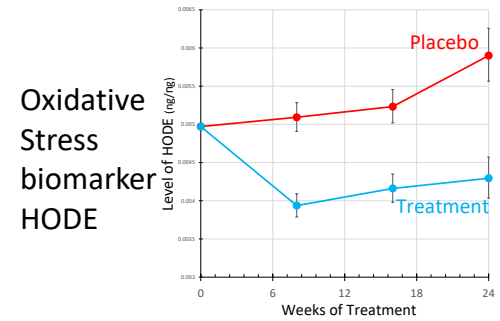


Treatment of elevated scalp oxidative stress results in decreased hair oxidative stress:





Scalp oxidative stress is a key contributor to non-disease hair loss  
Reduction of scalp oxidative stress using existing scalp care benefit agents (right), reduces hair loss and increases hair count:



Davis, Michael G., et al. "Scalp application of antioxidants improves scalp condition and reduces hair shedding in a 24-week randomized, double-blind, placebo-controlled clinical trial." *International Journal of Cosmetic Science* 43 (2021): S14-S25.

Trüeb, Ralph M., et al. "Scalp condition impacts hair growth and retention via oxidative stress." *International journal of trichology* 10.6 (2018): 262.



**TRUE OR FALSE?**

Going to bed with a wet head has a negative impact on scalp condition.



## **TRUE OR FALSE?**

Using natural oils on your scalp is good for scalp health.

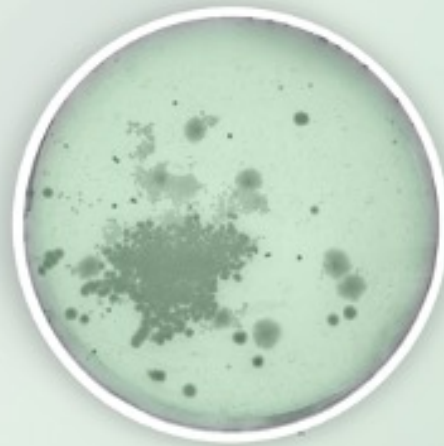


**Scalp  
Oils**  
Remove excess and  
reduce ROS

**Clinically Proven  
Anti-Dandruff Ingredient**



**Natural Oil**





# 1

Take good care for your scalp! Your scalp skin and hair will thank you.

# 2

Opt for clinically proven solutions – not everything is works and some options can make the situation worse.

# 3

Frequency matters. Oxidative stress occurs daily, and our scalps need regular care to remain in good condition.

# REFERENCES

- Xu J, et al. Dandruff-associated *Malassezia* genomes reveal convergent and divergent virulence traits shared with plant and human fungal pathogens. *PNAS*. 2007;104 (47):18730–5.
- Dawson TL Jr. *Malassezia globosa* and *restricta*: breakthrough understanding of the etiology and treatment of dandruff and seborrheic dermatitis through whole-genome analysis. *J Investig Dermatol Symp Proc*. 2007;12(2):15–9.
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- Kerr K, et al. Epidermal Changes Associated with Symptomatic Resolution of Dandruff Biomarkers of Scalp Health. *Int J Dermatol*. 2011;50(1):102–13.
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- Davis, Michael G., et al. "Scalp application of antioxidants improves scalp condition and reduces hair shedding in a 24-week randomized, double-blind, placebo-controlled clinical trial." *International Journal of Cosmetic Science* 43 (2021): S14-S25.
- Schwartz, J., et al., The role of oxidative damage in poor scalp health: ramifications to causality and associated hair growth. *Intl J Cosm Sci*, 2015. 37 (Suppl 2): p. 9-15.
- Trüeb, Ralph M., et al. "Scalp condition impacts hair growth and retention via oxidative stress." *International journal of trichology* 10.6 (2018): 262.





THANK YOU!