

PTZ Conditioner Results in Improved PTZ Retention on Scalp vs Cosmetic Conditioner

Hsin Tsai, BS, Shane Whitaker, BS, Dave Weisgerber, BS, Heather Rocchetta, PhD, Susana WaiminSiu, BS
The Procter & Gamble Company, Cincinnati, Ohio

INTRODUCTION

Over 50% of Americans have experienced dry scalp, flaking and itch associated with dandruff. Treatment with antidandruff shampoo containing pyrithione zinc (PTZ) is the most commonly used effective method of controlling dandruff. Clinical studies have demonstrated that PTZ, ranging in levels from 0.33% to 2%, exhibits a dose response for dandruff efficacy. For the tested ranges, the higher the level of PTZ, the greater the dandruff efficacy observed.

Following antidandruff shampoos with a cosmetic conditioner, can compromise dandruff efficacy due to removal of PTZ from scalp. This human study was designed to measure the effects of using an innovative, 0.5% platelet PTZ containing conditioner versus a cosmetic conditioner in combination with a 1% platelet PTZ containing shampoo. The primary endpoint of this study was scalp deposition using HPLC for the analysis of PTZ.

OBJECTIVE

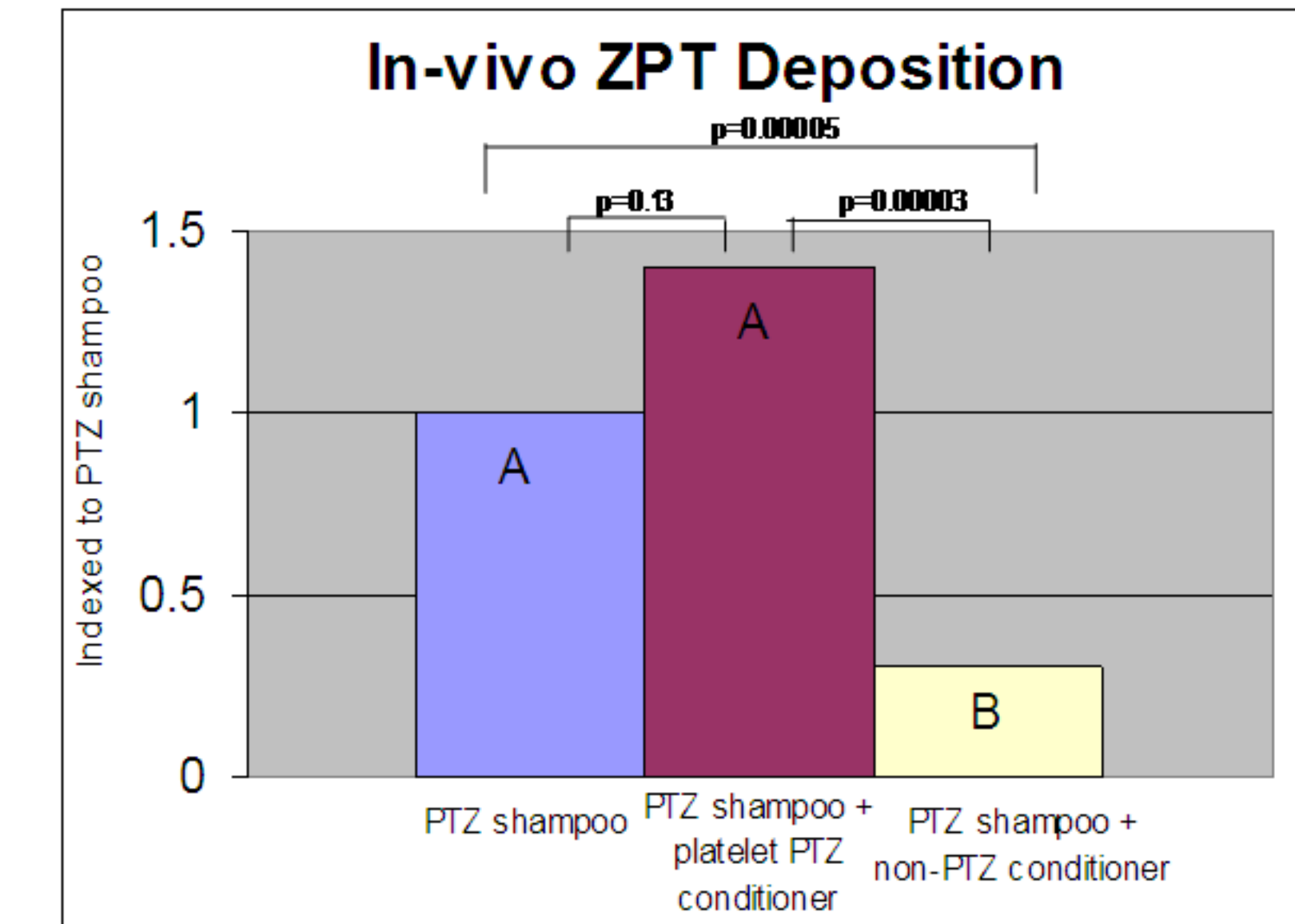
Measure the deposition and retention of either a platelet PTZ containing conditioner or a non PTZ containing conditioner in combination with a PTZ containing shampoo on the human scalp.

RESULTS

PTZ Deposition

Use of a PTZ shampoo + Non PTZ containing conditioner removes significant amounts (70%) of PTZ versus PTZ containing shampoo + PTZ containing conditioner.

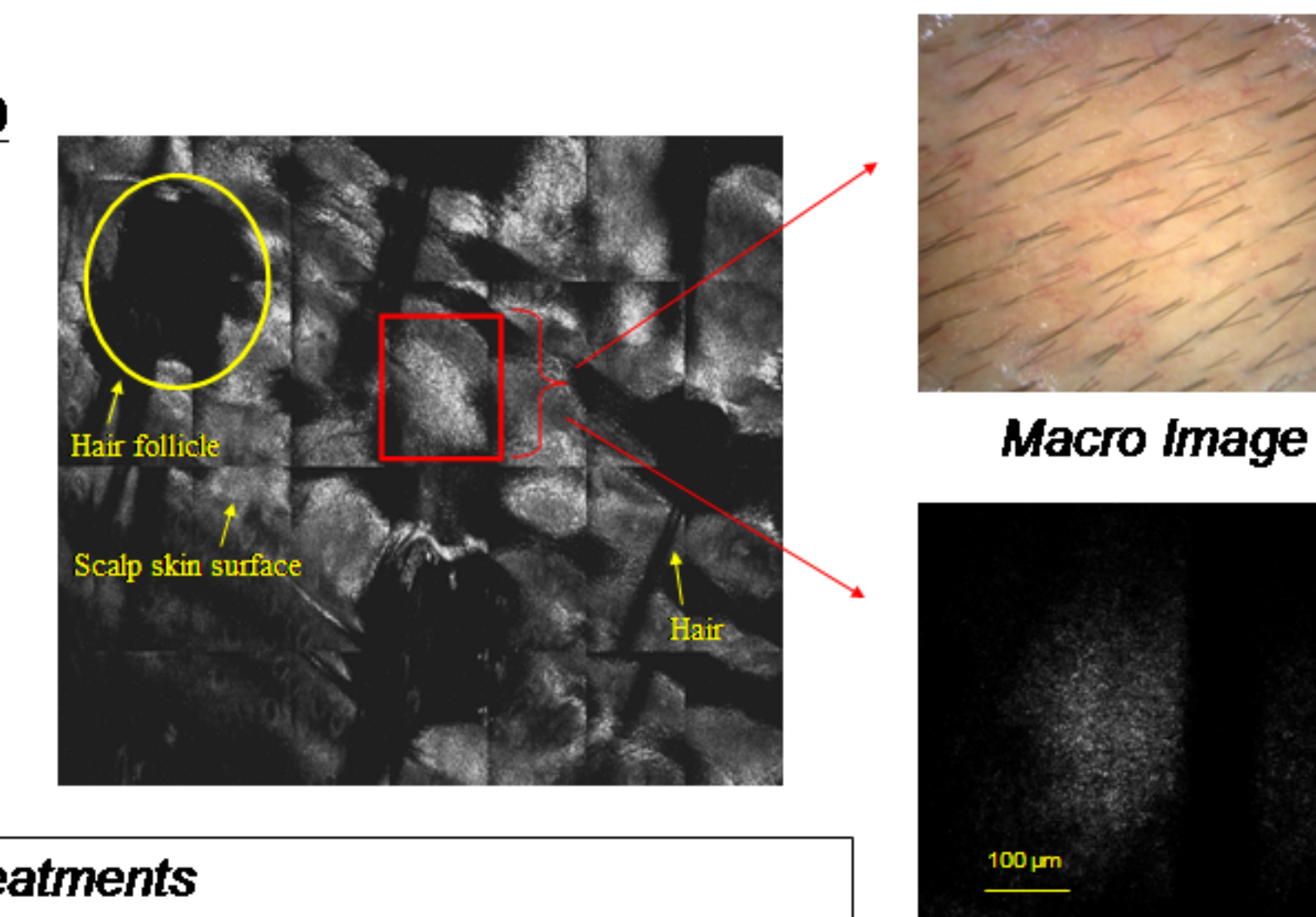
PTZ shampoo + PTZ conditioner may provide incremental antidandruff protection versus using PTZ containing shampoo alone.



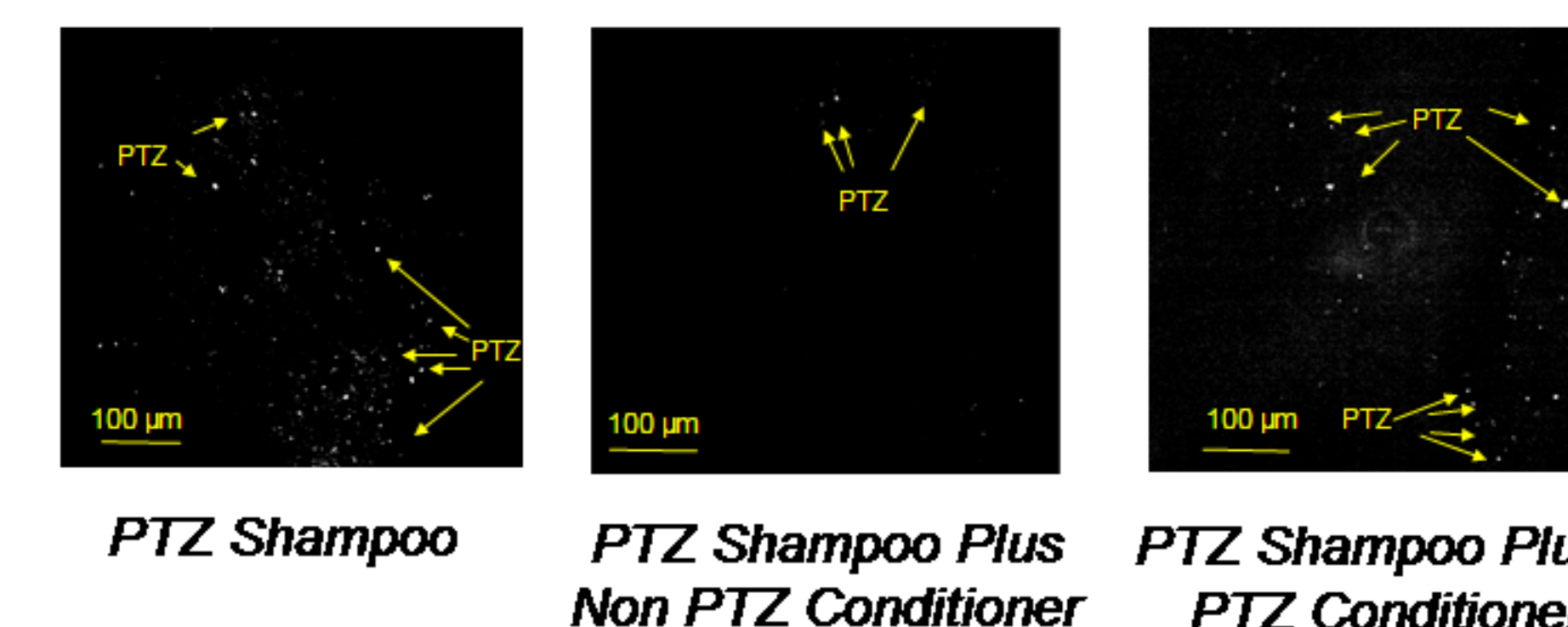
Confocal Laser Images of PTZ on Scalp

Images clearly show decreased deposition when using non-PTZ conditioner.

Images clearly show increased PTZ deposition when using PTZ containing conditioner.



Scalp Treatments



METHODS

Overview: 43 Subjects were recruited for this study (27 male / 16 Female) – all undergoing a 1 week preconditioning period using a clarifying shampoo. On Day 1 (post preconditioning) all panelists underwent sampling to verify that no PTZ was present on the scalp. The panelists then underwent 2 consecutive days of treatment with PTZ containing shampoo and PTZ containing conditioner or PTZ containing shampoo and non PTZ containing conditioner. Subjects were then sampled for amount of PTZ found on scalp. In addition Confocal Laser Microscopy was performed to visually demonstrate PTZ deposition on the scalp.

Wash Methodology:

- Subjects underwent a controlled hair wash protocol for shampoo and conditioner products

Sampling Methodology:

- Apply extraction fluid to cylinder and scrub with moderate pressure using a glass rod
- Remove sample fluid and repeat procedure combining
- Analyze extracted PTZ sample

Confocal Laser Microscopy:

- Subjects followed the wash protocol described above for shampoo and conditioner products
- Imaging fluid was applied to the scalp and a Vivascope 1500 (LucidInc.) was used to capture laser confocal images following each product treatment
- The same subjects were used for each of the 3 product treatments
- Subjects washed with a clarifying shampoo between test products to remove PTZ deposited from the previous treatment
- Confocal images were captured following clarifying shampoo usage to ensure complete removal of PTZ prior the next treatment regimen



CONCLUSIONS

AD Shampoo & Non AD Conditioner habit reduces retained PTZ level on scalp and resultant flake protection.

AD Shampoo & AD Conditioner habit increases remaining PTZ level on scalp and resultant flake protection.

References

1. Bailey, P., C. Arrowsmith, K. Darling, J. Dexter, J. Eklund, A. Lane, C. Little, B. Murrar, A. Scott, A. Williams, and D. Wilson. 2003. A double-blind randomized vehicle-controlled clinical trial investigating the effect of ZnPTO dose on the scalp vs. antidandruff efficacy and antimycotic activity. Intern. J Cos Sci. 25:183-188.