

# A TOPICAL SKIN CARE PRODUCT REGIMEN CONTAINING N-ACETYL GLUCOSAMINE AND NIACINAMIDE IMPROVES THE APPEARANCE OF FACIAL PHOTOAGING IN CHINESE

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## INTRODUCTION & OBJECTIVE

We previously reported<sup>(1)</sup> that a topical formulation containing niacinamide (N) and N-acetyl glucosamine (NAG), an oxidatively stable analog of glucosamine, provided facial photoaging appearance benefits in caucasian subjects. To further demonstrate the scope of skin benefits obtainable from this ingredient combination, two clinical studies testing 4% N + 2% NAG were conducted with Chinese subjects from Beijing.

## STUDY 1 - METHODS

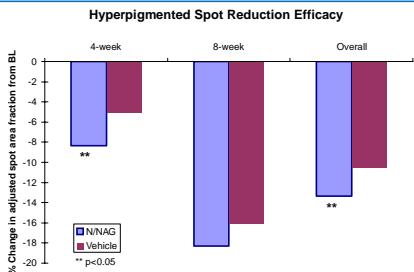
- 108 females, 25-54 yrs with facial hyperpigmentation
- 1 wk normalization + 8 wks treatment
- Design: Split-face paired comparison
- Treatments – N/NAG regimen and vehicle regimen
- Regimens - Day time SPF 15 lotion, night time cream ~2.4 µg/cm<sup>2</sup> of each once per day
- Assessments at BL, 4 and 8 wks (facial imaging system)
- Measures:
  - Image analysis for spot area fraction (cheek)
  - Image analysis for L\*a\*b\* (cheek)
- Overall comparisons via repeated measures model

## STUDY 2 - METHODS

- 204 females, 25-55 yrs with facial hyperpigmentation
- 1 wk pre-conditioning + 8 wks treatment
- Design: Full face paired comparison (2 groups)
- Treatments – N/NAG regimen and vehicle regimen
- Regimens - Day time SPF 15 lotion, night time cream ~4 µg/cm<sup>2</sup> of each once per day
- Assessments at BL, 4, 6, and 8 wks (facial imaging system)
- Measures:
  - Image analysis for spot area fraction (cheek)
  - Non-Contact SIAscopy for melanin spots (cheek)<sup>(2)</sup>
  - Non-Contact SIAscopy for melanin evenness<sup>(2)</sup> (variability in pixel gray-scale over region of interest)
  - Expert visual grading of images

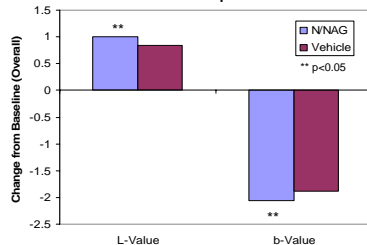
## RESULTS

### Study 1



- N/NAG regimen significantly reduced spot area

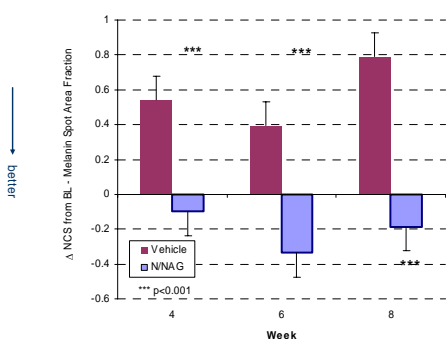
### Skin Tone Improvement



- N/NAG regimen significantly improved L & b overall

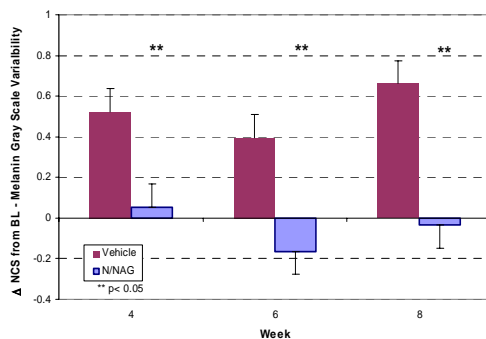
### Study 2

#### Melanin Spot Efficacy



- N/NAG regimen significantly reduced melanin spot area
- Also significant colored spot area reductions at all time points

#### Melanin Evenness



- N/NAG regimen significantly improved melanin evenness
- Tone also more even after 6 wks by expert grading (p < 0.05)

## CONCLUSION

- Results from these two studies indicate that a topical product regimen containing N/NAG is effective at reducing the appearance of photoaging associated hyperpigmentation in Chinese subjects.

This work was funded by P&G Beauty.

## REFERENCES:

1. Bissett D., et al, *J. Amer. Acad. Derm.* 54:AB43 (2006). Manuscript in preparation.
2. Matts P., et al, "Bioengineering of the Skin: Skin Surface Imaging and Analysis", 2<sup>nd</sup> Ed., Vol. IV, pp. 423-446 (2006).

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