



**Non-invasive
transcriptome extraction
using the Mindera dermal
biomarker patch**

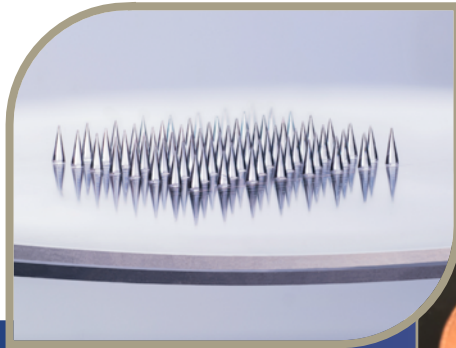
DERMAL INTELLIGENCE™



Background

- Skin disease diagnosis remains predicted on subjective visual examination, followed by biopsy and histology
- In inflammatory diseases, biopsy is not typically performed, particularly for diseases such as psoriasis and atopic dermatitis
- Scientific understanding of the skin at a genomic and transcriptomic level continues to outpace our ability to clinically leverage this data
- The wealth of molecular information currently available and the pace at which new data can be acquired suggests methods that allow for minimally invasive biomarker collection in the skin could dramatically alter our understanding of skin disease and positively impact treatment paradigms

Mindera Platform: Scalable Transcriptomics

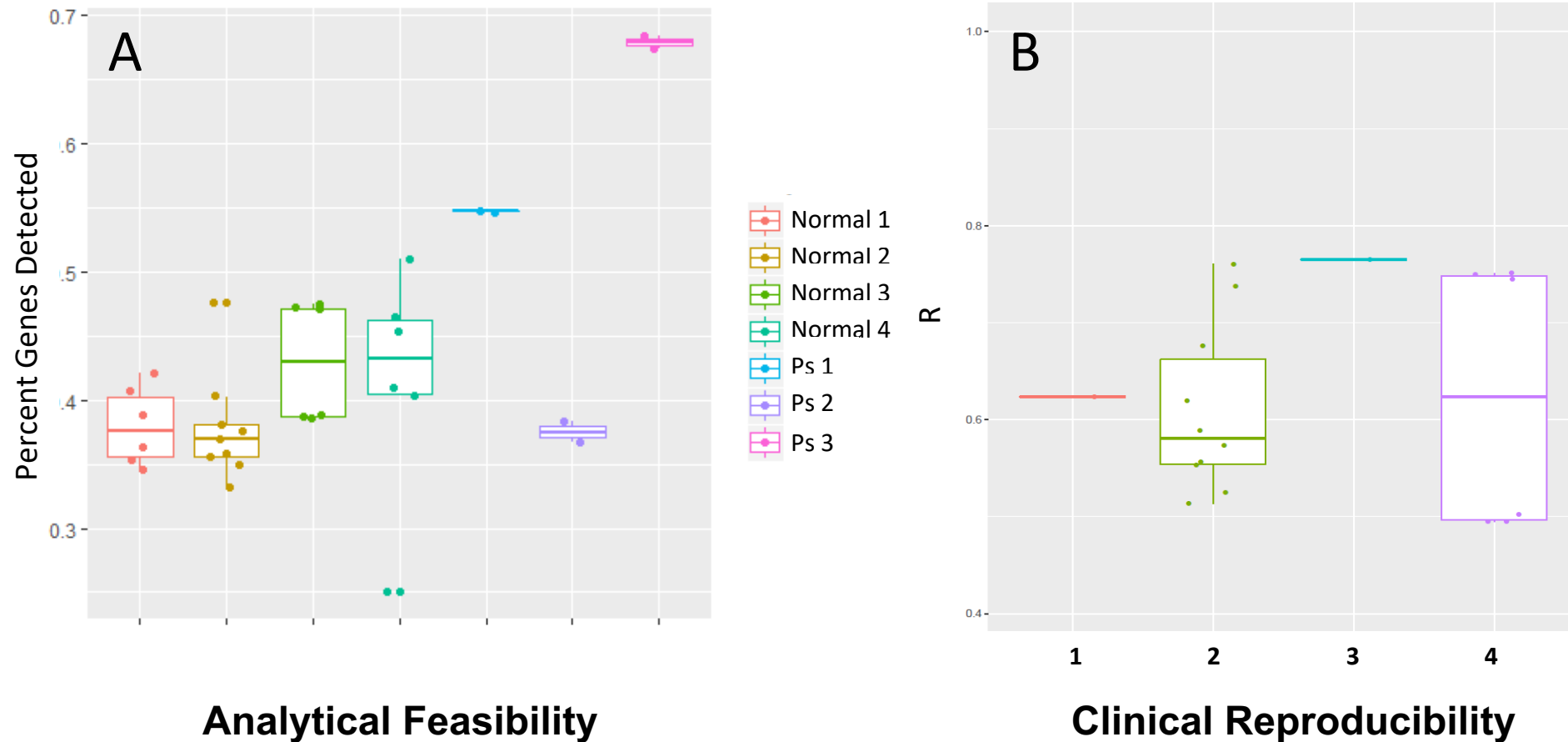


- Simple 5-minute application
- No pain, no scar
- Excellent clinical safety profile
- ~7,000 RNA transcripts extracted per patch
- IP protected (claims issued)
- FDA Registered Class I device

- Machine Learning matches biomarkers with health outcomes
- Use skin's current RNA signature to personalize skin care decisions



DBP Successfully Extracts the Transcriptome in Healthy and Diseased Skin

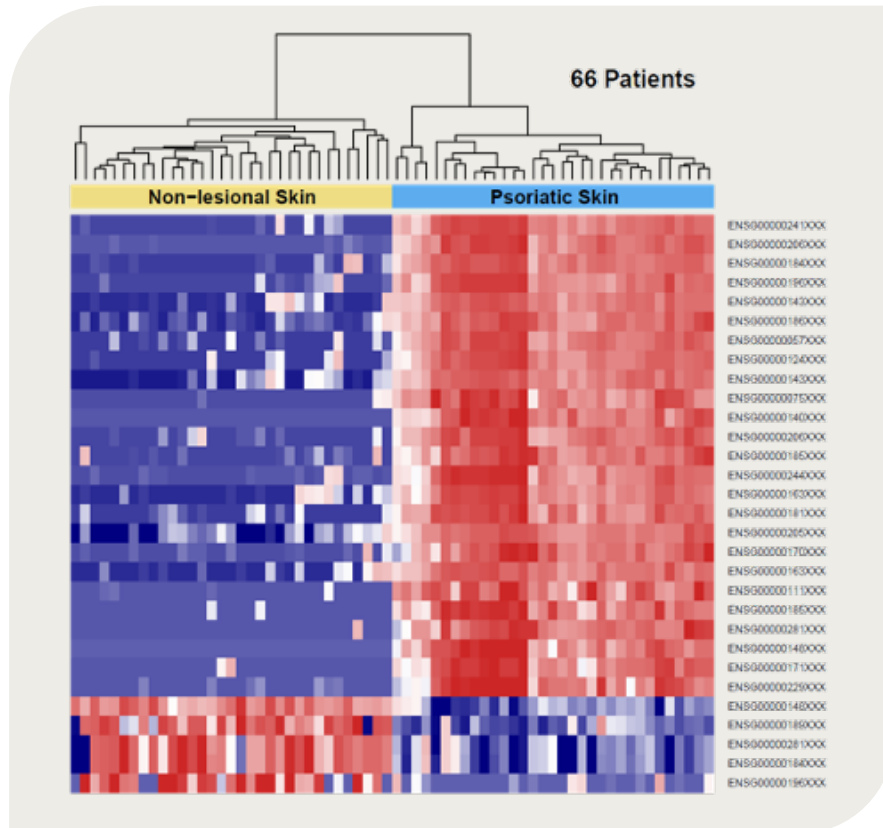


Excellent Analytical Overlap with Skin Biopsy



Overlap of Genes Detected in Biopsy versus Dermal Biomarker Patch Collection

Mindera DBP Has Been Clinically Validated in Psoriasis Patients



- ✓ Lesional vs. non-lesional skin sampled using Mindera patches in **66 patients** and compared to punch biopsy
- ✓ Mindera patches and punch biopsy yielded **equivalent biomarker data**
- ✓ 30 highest variance genes selected & unsupervised clustering performed
- ✓ Excellent discrimination between **lesional** and **non-lesional** skin in same patient
- ✓ **Signature recapitulates known transcriptomic differences in psoriasis**

Conclusions

- There is a need for an efficient way to molecularly assess the skin, particularly in inflammatory diseases where punch biopsy is not part of the standard of care
- Dermal Biomarker Patch technology allows for minimally invasive extraction of the transcriptome from healthy and diseased skin
- Transcriptome extracted from DBP is analytically equivalent to that from biopsy with high dynamic range
- Analysis of complex phenotypes or the generation of predictive algorithms is now possible

Contact Information

Tobin Dickerson, Ph.D.

CSO & Co-founder

tdickerson@minderadx.com

Tel: 1 858.810.6070

www.minderadx.com



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