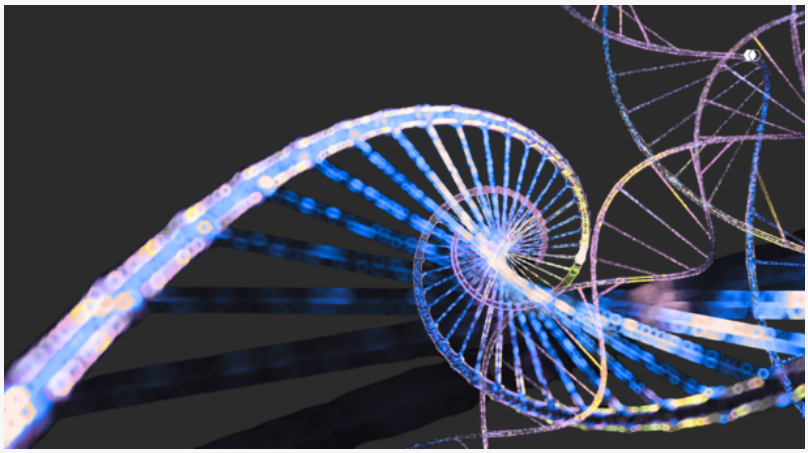
Parallel Health Announces Technology to Map Skin Microbiome Metabolic Function, Advancing Precision Skin Aging

Metabolic Microbiome Profiling™ maps what an individual's skin microbiome is producing and missing, filling a key gap in microbiome science.



Parallel Health Introduces Metabolic Microbiome Profiling™ for Skin Longevity and Anti-Aging

SAN FRANCISCO, CA, UNITED STATES, March 17, 2026 /EINPresswire.com/ -- For almost two decades, one of the central criticisms of microbiome science has been straightforward: identifying which microbes are present doesn't tell you what they're doing. Without functional metabolic data, the information remains descriptive. Researchers have repeatedly pointed to this gap as the reason microbiome diagnostics have struggled to translate into meaningful clinical interventions, particularly for skin health and aging.

> We can see exactly what the microbes on your skin are making that help your skin and what's driving damage. We can then intervene with precision."
>
> *Dr. Nathan Brown, Chief Science Officer, Parallel Health*

Parallel Health, a precision skin health company, today announced Metabolic Microbiome Profiling™, a technology that maps the specific bioactive compounds an individual's skin microbiome is actively synthesizing or failing to produce, including vitamins, antioxidants, short-chain fatty acids, peptides, and lipids that directly influence skin aging, barrier integrity, and immune function.

The announcement represents a progression the company has been building toward methodically. While much of the microbiome industry still relies on species-level identification with relative abundance data, Parallel had previously integrated absolutely quantitative whole genome sequencing into its platform, measuring exact microbial abundances at strain-level resolution. Metabolic Microbiome Profiling

builds on that quantitative foundation to read what those organisms are functionally producing.

Why metabolic function matters for skin aging

Published research has increasingly established that microbial metabolites play a direct role in skin aging mechanisms. Commensal species such as Staphylococcus epidermidis can promote ceramide synthesis through sphingomyelinase secretion, strengthening barrier integrity. Short-chain fatty acids produced by species like Cutibacterium can regulate keratinocyte differentiation, lipid synthesis, and acid mantle maintenance. Postbiotic metabolites have been shown to upregulate collagen gene expression and protect against oxidative damage.

Conversely, pathogenic and dysbiotic species produce inflammatory metabolites, reactive oxygen species, and barrier-degrading byproducts associated with collagen degradation, hyperpigmentation, moisture barrier compromise, and the chronic low-grade inflammation researchers term "inflammaging."
However, these functions are not guaranteed by the presence of a species alone. The same organism can behave differently from person to person, contributing beneficially in one individual's ecosystem while driving inflammation or barrier disruption in another. Without metabolic-level data, there is no way to know which role a given species is playing on a given person's skin.

"The skin microbiome produces hundreds of bioactive compounds that regulate everything from pH to immune function to barrier integrity," said Dr. Nathan Brown, Co-Founder and Chief Science Officer of Parallel Health. "Some of these – ceramides, B vitamins, natural exfoliants – are the same ingredients people pay for in anti-aging skincare products. Your microbiome may already be producing them around the clock. We were already quantifying the organisms responsible. Now we can see exactly what these microbes are making that help your skin and what's driving damage. We can then intervene with precision. This is the path to skin longevity."

A broader shift toward precision skin longevity

The announcement arrives amid growing mainstream interest in biological age testing, functional health panels, and precision approaches to longevity. Skin, the body's largest organ and most visible marker of biological aging, has been largely absent from that movement. Metabolic microbiome profiling applies the same underlying principle that transformed nutrition and supplementation: replace generalized protocols with data-informed, individualized intervention.

Parallel Health translates metabolic profiling results into personalized clinical protocols through its MD-03 Protocol™, delivered under board-certified dermatological oversight via its telehealth platform.

"We're not just building another skincare brand," said Natalise Kalea Robinson, Co-Founder and CEO. "We're building the infrastructure to understand skin at a depth that hasn't been possible, and to act on it with clinical precision. This is predictive, precision skin health."

About Parallel Health

Parallel Health is a vertically integrated precision skin health company pioneering Microbiome Dermatology™. The company's platform spans telehealth dermatology, skin microbiome diagnostics using quantitative shotgun metagenomics, proprietary cosmeceutical manufacturing, custom compounded prescriptions, and a phage therapy pipeline. Parallel maintains proprietary biobanks containing over 10,000 characterized microbial strains with 90% genetic novelty to science, multiple patents pending, in-house manufacturing, and AI-driven predictive models built on one of the largest proprietary skin microbiome datasets in existence. The company is currently in-network with Aetna and Cigna in California.

For more information, visit parallelhealth.io.

Olivia Jensen
Parallel Health
+1 415-917-1660
email us here
Visit us on social media:
LinkedIn
Instagram
Facebook
YouTube
TikTok
X
