



## Biocogent, LLC

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### A Natural Approach to Balancing the Skin Microbiota using a Botanical Extract with Roots in Traditional Chinese Medicine

*Brianna Scacchi, Kimberly Dew, Joseph Ceccoli, and Paul Lawrence*

#### PRODUCT/SERVICE BACKGROUND INFORMATION

There is considerable interest in identifying natural ingredients that promote skin health via modulation of the microbial members of the skin microbiota. An array of microorganisms including bacteria, viruses, and fungi reside on our skin. One of the more prevalent bacteria is *Cutibacterium acnes*, which plays a role in flare-ups of acne vulgaris (AV) due to excessive growth and biofilm formation. While antibiotics are often prescribed to combat severe acne, many dermatologists are hesitant to rely upon these antimicrobial compounds and an increasing number of strains of *C. acnes* have evolved antibiotic resistance, forcing scientists to research alternative strategies. The plant *Epimedium sagittatum*, with roots in ancient Chinese medicine, was investigated for its purported anti-bacterial properties.

#### WHAT IS THE COMPANY INTRODUCING TO THE MARKET/INDUSTRY?

An *E. sagittatum* extract was tested in both the lab and in a clinical study for its potential anti-biofilm and anti-inflammatory properties that could be applied to countering blemished skin. The extract potently diminished *C. acnes* biofilms and their associated inflammation. Additionally, gene expression studies determined that the extract elicits positive epigenetic changes in monolayers of keratinocytes. Recently, a one-month clinical study was conducted with twice-daily application of finished formulations containing the extract on individuals with blemished skin. Participants exhibited substantially reduced sebum levels as well as inflammation and redness. Finally, *C. acnes* growth on the skin was significantly diminished as evidenced from *C. acnes* associated coproporphyrin III fluorescence levels.

#### HOW WILL THIS NEW PRODUCT/SERVICE IMPACT THE INDUSTRY (BENEFITS)?

Given these outcomes, it is clear the *E. sagittatum* extract, subsequently named Grandiciin®, reduces *C. acnes* biofilms which is complemented by its anti-inflammatory activity. Furthermore, the capacity of Grandiciin® to diminish *C. acnes* levels, redness, and sebum production on the skin in a clinical study highlights its utility as an exciting new ingredient for modulating the skin microbiome and promoting balanced skin health when formulating for blemish-prone skin.