Non-Confidential Description - PSU No. 3417
“Induction of Endogenous Apoptotic Agent as a Treatment for Acne”

Keywords:
Skin biology, acne therapy

Links:
Inventor Website
Related Article

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Background
Acne is one of the most common skin conditions affecting the general population and billions of dollars are spent annually on both over-the-counter and prescription acne treatments. Although the oral prescription medication isotretinoin (Accutane®, others) is the most potent agent available to treat acne, its use is limited by its side effect profile which includes the risk of birth defects. The mechanism by which isotretinoin has its potent and long-lasting effects in acne is unknown.

Invention Description
We have identified the mechanism by which isotretinoin has potent effects in fighting acne. An endogenous protein has been identified in the skin that mediates the apoptotic response of the human sebaceous gland to isotretinoin in addition to demonstrating other anti-acne effects. Levels of this protein are increased in the patient’s skin in response to isotretinoin. Our in vitro studies indicate that this endogenous protein decreases lipid production and has several additional anti-acne effects.

Advantages/Applications
- Endogenous protein is likely to have an improved safety profile over the standard therapy
- High throughput assay is available to screen compounds to activate the endogenous protein
- Potential for topical delivery to the skin