

## RESEARCH REMOTE SEMINAR SERIES

The Center for Dermal Research welcomes

**Stephanie Wheeler, MS**

**Genemarkers**

***“Evaluating the Efficacy of CBD in Topical Skincare Products”***

**Monday, November 8, 2021 5:30pm EST**



**Stephanie Wheeler, MS**

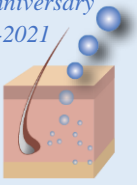
Stephanie Wheeler, MS is the Laboratory Supervisor at Genemarkers, a contract research organization and CLIA/CAP certified laboratory that specializes in genomics. Stephanie received her Bachelors in Biology/Chemistry and a Master’s degree in Pharmacogenomics from Manchester University. Stephanie has played an instrumental role in bringing on new testing services for the Company’s R&D and Clinical testing divisions. Stephanie has been an author on peer reviewed publications and has presented scientific research at national scientific meetings.

**Abstract:** Cannabidiol (CBD) is a non-psychoactive cannabinoid extracted from the hemp plant. CBD and other cannabinoids are being incorporated into cosmetic skin care products, OTC products, and topical medicines. Claims for these CBD-containing products are diverse and include anti-inflammatory, anti-itch, anti-acne, anti-aging, wound healing, and analgesic. However, there is limited and in some cases, conflicting scientific data to support these claims. Factors such as CBD extraction method, dose, and delivery system all potentially play a role in the downstream effects of the final product.

The biological effects of topical CBD are mediated through the Endocannabinoid System (ECS), components of which are expressed in various skin cells and structures (i.e. keratinocytes, sebocytes, sweat glands, sensory nerves, and hair follicles). Endocannabinoids can elicit effects through additional receptors such as TRPVs, PPARs, and G-Coupled Protein Receptors.

**(continues on page 2)**





## RESEARCH REMOTE SEMINAR SERIES

To help determine biological mechanisms and substantiate marketing claims of CBD-containing skincare products, Genemarkers developed a gene expression panel focused on the biological effects of CBD. Our data demonstrates that topical application of CBD regulates over 100 genes expressed in the skin, including growth factors, extracellular matrix molecules, antioxidants, and inflammatory molecules. This CBD-specific screening panel, along with other genomic and proteomic tools, can be used in product development to identify the most effective doses and formulations, supporting a science-driven approach to enhance product efficacy and claims substantiation. An example included in this presentation demonstrates how CBD can provide protection against the harmful effects of UV exposure to the skin.

### CONFERENCE LINK:

Meeting link:

<https://rutgers.webex.com/rutgers/j.php?MTID=md624c31dafb72eb2e4f85120de8871ee>

Or send an email to [cdr\\_frontdesk@dls.rutgers.edu](mailto:cdr_frontdesk@dls.rutgers.edu) to request a direct invite.

