

CBG Meets the Skin: Could This Minor Cannabinoid Have a Major Future in Dermatology?

Cannabigerol, better known as CBG, has spent much of its scientific life in the shadow of CBD and THC. But cannabinoid research is changing. Scientists are increasingly looking beyond the two best-known cannabinoids, and one particularly interesting area of research is something we all carry around with us every day: our skin.

A 2025 study published in *Cells* provides a good example. Researchers investigated CBG using laboratory models designed to reproduce some of the inflammation and skin changes associated with atopic dermatitis (AD), commonly known as eczema. The results were interesting enough to justify further research, but there is an important point to understand from the beginning: this was mainly preclinical research. It does not prove that a CBG cream can treat eczema in people.

What did the researchers find?

Atopic dermatitis is more complicated than simply having dry, red or irritated skin. The condition involves inflammation, immune activity and changes in the skin barrier - the protective outer layer that helps keep moisture in and unwanted substances out.

The researchers first looked at cells in the laboratory. They found that CBG influenced several inflammatory markers, including IL-1 β , IL-6 and TNF. They then studied CBG in mice with an experimentally induced form of dermatitis. Here, they reported several interesting changes. The CBG-treated animals showed reduced severity of dermatitis, less thickening of the epidermis and fewer mast cells in the affected skin. Researchers also observed changes in several molecules involved in inflammation.

You don't necessarily need to remember the names of all these molecules. What is more important is the overall picture. The researchers were not seeing a change in just one laboratory measurement. CBG appeared to influence several different parts of the inflammatory response and the changes occurring in the skin.

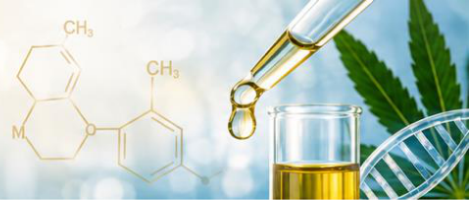
So, what might CBG actually be doing?

The researchers also investigated some of the biological pathways involved. They found changes in signaling systems known as JAK/STAT and NF- κ B. These pathways help cells control immune and inflammatory responses. Changes were also observed in factors associated with the skin barrier.



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This is where modern cannabinoid research becomes particularly interesting. Simply asking whether a cannabinoid is "anti-inflammatory" doesn't tell us very much. Scientists increasingly want to know how a cannabinoid interacts with cells, which biological pathways it influences, what concentration is required and, most importantly, whether those laboratory effects eventually translate into meaningful results in people.

With CBG and atopic dermatitis, we are still near the beginning of that journey.

Why put cannabinoids on the skin?

Topical cannabinoid research is attracting attention for a fairly logical reason. If researchers want to study an effect in the skin, applying a cannabinoid directly to the skin may offer advantages over consuming it orally. With an oral product, the cannabinoid first has to be absorbed, metabolized and distributed through the body before some of it eventually reaches the skin.

Topical delivery sounds simpler, but developing a good formulation is actually quite challenging. Researchers need to know whether the cannabinoid remains stable in the product, whether it can penetrate the outer layers of the skin and how much actually reaches the area where it might have a biological effect. The cream, gel, ointment or other ingredients used to carry the cannabinoid can also influence what happens.

This means that simply putting CBG into a cream doesn't automatically create a product equivalent to the formulation used in scientific research.

There is already some early human research involving topical cannabinoids. One small study, for example, investigated an ointment containing both 30% CBD and 5% CBG in people with atopic dermatitis. Researchers reported changes in skin hydration, water loss through the skin and redness. However, because the product contained several ingredients, the study cannot tell us how much of the observed effect was specifically caused by CBG.

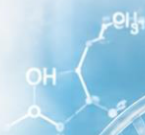
A 2025 systematic review looking more broadly at cannabinoids in dermatology reached a similarly cautious conclusion. Some improvement in itching was reported across the available studies, but significant benefits were not demonstrated for several other measures, including atopic dermatitis disease scores. The researchers concluded that larger and better-designed clinical studies are still needed.

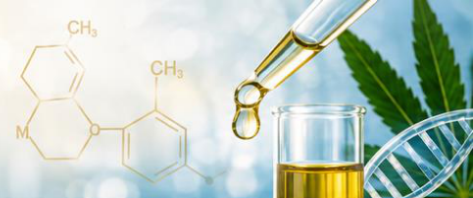
Promising science is not the same as clinical proof

This is perhaps the most important message to take away from the research. Cell studies help scientists understand possible mechanisms. Animal studies allow them to investigate what happens when immune cells, inflammation and living tissue interact. Human clinical trials are needed to determine whether something actually works safely and meaningfully in people.



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The 2025 CBG study gives us interesting evidence from the first two stages - but we have not yet reached the third.

Could CBG eventually become an important part of dermatological research and topical cannabinoid formulation? There are certainly enough interesting biological signals to keep scientists asking questions. The next step will be well-designed human studies looking at clearly defined CBG formulations, appropriate concentrations, skin penetration, safety and meaningful results for patients.

For now, CBG and atopic dermatitis give us something perhaps more valuable than another exciting cannabinoid claim: a genuinely interesting scientific question that researchers are beginning to answer.

Dr. Peter Verdegem, Ph.D., MBA



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