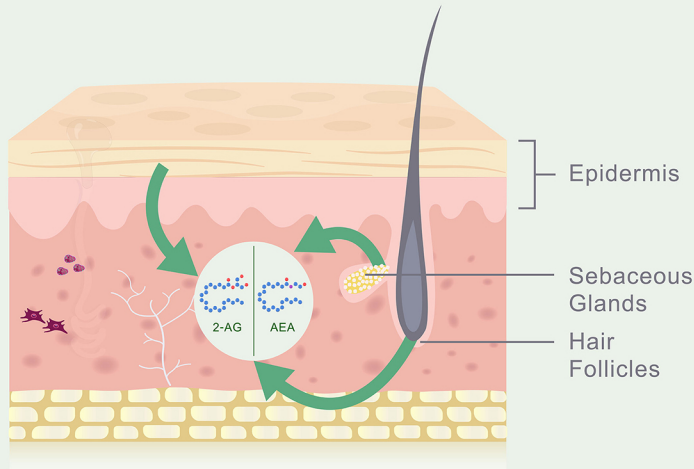


SKIN AND CBD RECEPTOR CHART

THE ENDOCANNABINOID SYSTEM (ECS) PLAYS A RELEVANT ROLE IN HEALTHY AND DISEASED SKIN. SPECIFICALLY, WE REVIEW HOW THE DYSREGULATION OF ECS HAS BEEN ASSOCIATED TO DERMATOLOGICAL DISORDERS SUCH AS ATOPIC DERMATITIS, PSORIASIS, SCLERODERMA AND SKIN CANCER.

Endocannabinoid Production

The skin produces endocannabinoid molecules such as anandamide (AEA) and 2-arachidonoylglycerol (2-AG). These endocannabinoids are synthesized by several cell type in the epidermis, hair follicles and sebaceous glands. The endocannabinoid molecules are released in specific amounts, depending on the need of the organ.



Cannabinoid Receptor in the Skin

The CB1 and CB2 receptors are present in all cell types of the skin. The activation of CB1 and CB2 on epidermal keratinocytes results in the suppression of cellular proliferation, differentiation and the release of inflammatory mediators as well as the induction of apoptosis. On the other hand, activate CB1/CB2 receptor inhibit inflammatory responses of resident and infiltrating immune cells. In addition, activation of CB1 in the hair follicle by AEA reduce hair shaft elongation and intrafollicular proliferation, whereas it stimulates apoptosis and the development of cartagen regression. Sebaceous gland-derived sebocytes locally released endocannabinoid markedly enhance lipid production and apoptosis via CB2. Finally, skin-derived endocannabinoid inhibit sensory phenomena, such as pain and itch, via CB1 expressed on sensory afferent nerves.

