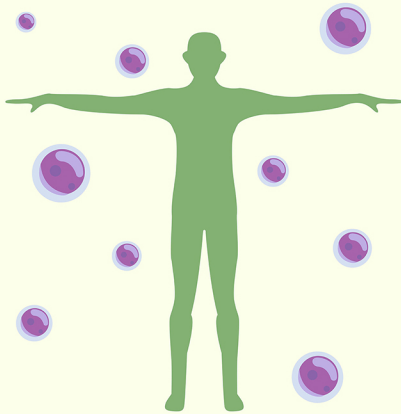


# ENDOCANNABINOIDS AND THE IMMUNE SYSTEM

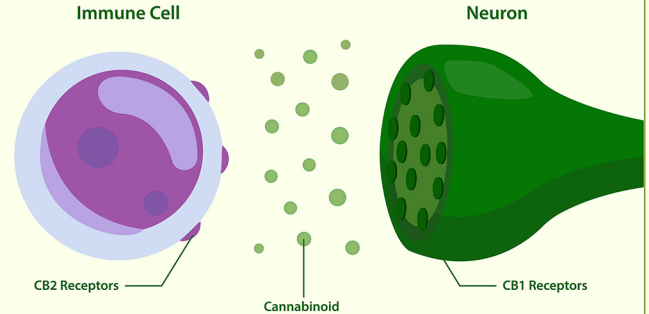
ENDOCANNABINOIDS ARE BELIEVED TO CONTROL IMMUNE FUNCTIONS AND PLAY A ROLE IN IMMUNE HOMEOSTASIS. IMMUNE CELLS EXPRESS BOTH CB1 AND CB2 RECEPTORS, HAVE FUNCTIONAL CANNABINOID TRANSPORT AND BREAKDOWN MECHANISMS.

## The Endocannabinoid System

Endocannabinoids, as typical bioactive lipids, have a short half-life and appear to act in an autocrine and paracrine fashion. Their immediate effective action on immune function may be at localized sites in the periphery and within the central nervous system. It is speculated that endocannabinoids play an important role in maintaining the overall "fine-tuning" of the immune homeostatic balance within the host.



**CB2** receptors are mostly found within the immune system.



Endocannabinoids are believed to control immune functions and play a role in immune homeostasis. Immune cells express both CB1 and CB2 receptors, secrete endocannabinoids and have functional cannabinoid transport and breakdown mechanisms. There is a large body of data that supports a functional relevance for 2-arachidonoylglycerol (2-AG) as acting through the cannabinoid receptor type 2 (CB2R) to inhibit migratory activities for a diverse array of immune cell types. However, unequivocal data that supports a functional linkage of anandamide (AEA) to a cannabinoid receptor in immune modulation remains to be obtained.

