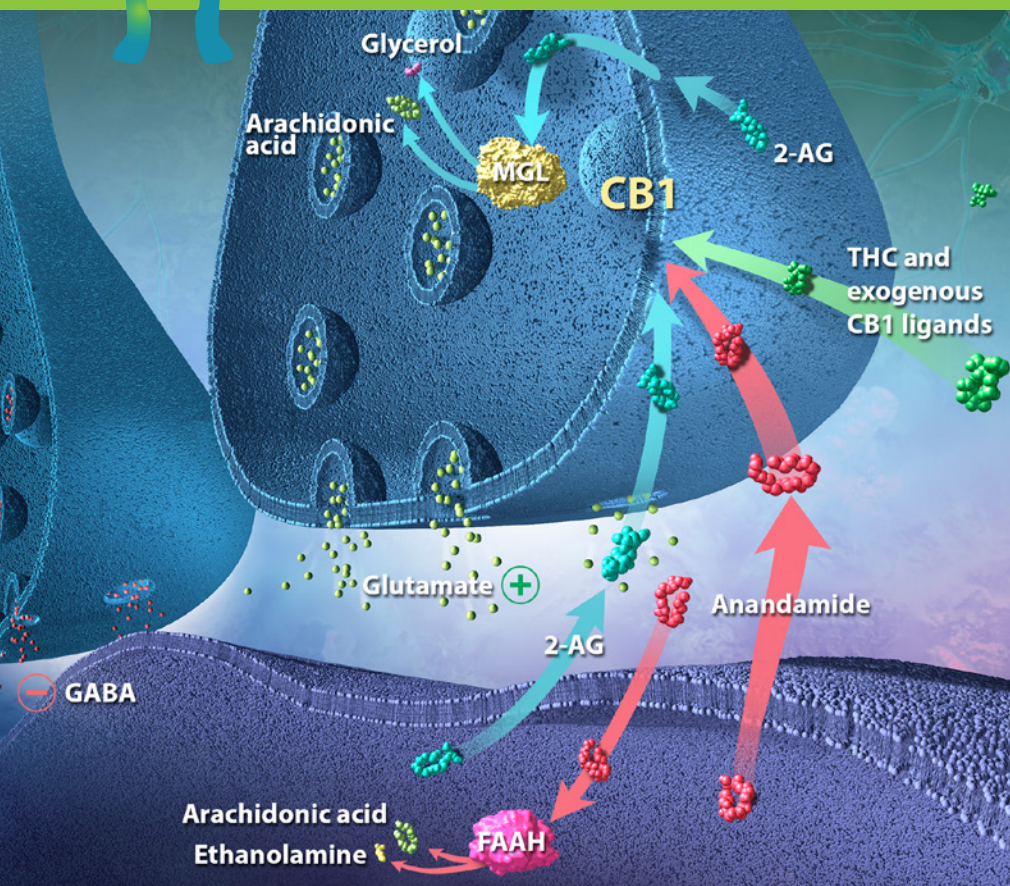


# Get to know the ENDOCANNABINOID SYSTEM (ECS)

A HEALTHY ECS =  
A HEALTHY BODY

The ECS is present in every organ in the body and affects practically all physiological processes, including memory, learning, mood, metabolism, heart and lung functions, reproduction and skin biology. When this system is out of balance, it's thought to contribute to a number of health disorders.

More research is needed to understand the untapped potential of the ECS and how it can be targeted to address unmet needs for patients.



**Endocannabinoids** are chemical compounds produced in almost all organs. They are lipid messengers that facilitate communication between cells and contribute to healthy physiological regulation and function.

- The two primary endocannabinoids are **AEA** (arachidonylethanolamine) and **2-AG** (2-arachidonylglycerol)

**Regulatory enzymes** produce and break down endocannabinoids, which can be synthesized by most cell types in the body.

- **FAAH** (fatty acid amidohydrolase), for example, breaks down AEA

Endocannabinoids act on various **receptors**.

- **CB1** receptors, primarily found in the brain, are detected in almost all organs
- **CB2** receptors are mostly found outside the brain
- Other receptors, such as **GPR55** and **TRPV** ion channels, are also found in most tissues

## UNTAPPED POTENTIAL

There's significant therapeutic promise in modulating the ECS. For example, THC (tetrahydrocannabinol) is used in FDA-approved dronabinol to treat nausea and vomiting. CBD (cannabidiol) has shown efficacy for certain treatment-resistant epilepsy syndromes. There is emerging demand for compounds with greater effectiveness and similar safety profiles. Research supports the potential for fluorinated CBD derivatives and novel combinations of naturally occurring phytocannabinoids to achieve this goal.

It is important to build upon what is known about the ECS and study natural and synthetic sources to determine efficacy and safety. Phytecs is enhancing preclinical ECS work in collaboration with leading researchers around the world.

## DISCOVERY OF THE ECS

**Professor Raphael Mechoulam** is generally acknowledged as the "father of cannabinoid medicine" following the 1964 discovery of THC with fellow researchers. 20 years later, he and his team were also involved in the research that found THC interacts with the ECS – and that the body produces its own cannabinoids.



Phytecs is a biotechnology company focused on developing therapies that target the body's endocannabinoid system to help patients facing serious diseases. To learn more, visit [phytecs.com](http://phytecs.com).

