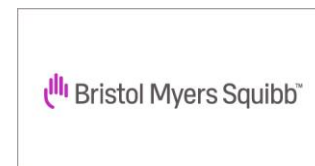
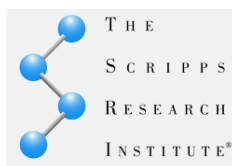


[zeposia website](#)

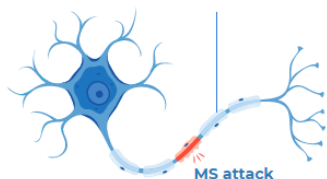
- Ozanimod is prescribed for the treatment of relapsing multiple sclerosis (RMS) and ulcerative colitis.
- Near 1 million people in the US have MS, and 85% are diagnosed with RMS.
- The drug was first discovered at The Scripps Research Institute, then licensed to the biotech company Receptos Inc. which was acquired by Celgene which was later acquired by BMS.
- In 2018 the drug was rejected by the FDA due to insufficient data, but approval was granted in 2020 for the treatment of RMS and in 2021 for the treatment of ulcerative colitis.
- It is on track for blockbuster sales by 2026 with estimated annual sales of 2.5 billion dollars.

Chen, C. *Biomedicines*, **2020**, 8, 227 <https://doi.org/10.3390/biomedicines8070227>  
Patents: US 9388147, **2015**. US 9382217, **2016**.

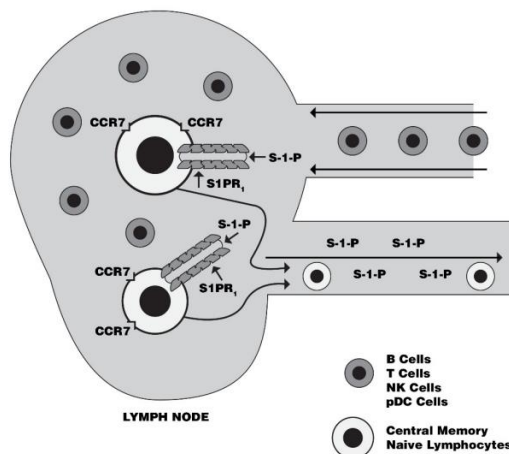


## Mechanism of Action

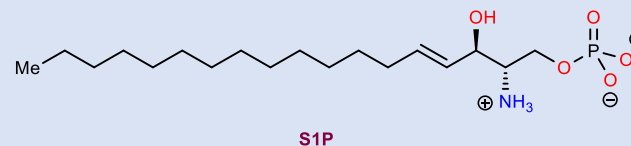
**Nerve cell**  
The nerves within the CNS are covered by a protective coating called myelin.



MS attacks the myelin, causing damage that can prevent the CNS from functioning like it should.



- MS occurs when the body's immune system attacks the central nervous system (CNS).
- Symptoms include: numbness, trouble with walking, fatigue, impaired vision, trouble processing information, problems with concentration, bowel and bladder problems.
- Sphingosine-1-phosphate (S1P) is a signaling molecule that via its G-protein-coupled receptors promotes movement of lymphocytes from peripheral lymphoid organs.
- Ozanimod is an antagonist for the S1PR-1 and S1PR-5 receptors sequestering lymphocytes away from their sites of chronic inflammation.



**S1P**

## Synthesis:

