

# Remyelination

The absence of mature oligodendrocytes for the repair of demyelination lesions is a critical factor in the pathology of MS and other debilitating CNS disorders of myelination. As such, regulating the maturation of oligodendrocytes and the resulting myelin production is an interesting target for potential new therapeutics.

GPR17 is an orphan G-protein-coupled receptor that is abundant in the CNS and has been shown to play a key role in regulating oligodendrocyte differentiation and maturation. Further research is needed to elucidate the exact mechanism through which GPR17 influences myelination.<sup>1,2</sup>

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## MDL29,951

MDL29,951 is a highly specific, small molecule activator of GPR17<sup>1</sup> that has been shown to be active in intact cells<sup>1</sup>. The ability to specifically activate GPR17 allows for the study of the exact role GPR17 plays in the maturation of oligodendrocytes and facilitates further study of this important process.

**Product No: 10-4537** 5 mg/ 25 mg/

## Pranlukast

GPR17 antagonist and CysLT1 antagonist that promotes remyelination.<sup>1,3</sup>

**Product No: 10-2441** 50 mg/ 250 mg/

## Benztropine mesylate

Benztropine has been shown to decrease the clinical severity of relapsing-remitting multiple sclerosis in an experimental autoimmune encephalomyelitis (EAE) model. The efficacy of the drug resulted directly from enhancement of remyelination. The mechanism of action is believed to involve direct antagonism of M1 and/or M3 muscarinic receptors.<sup>4</sup>

**Product No: 10-2324** 1 g/

## Quetiapine hemifumarate

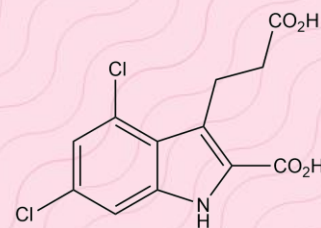
Atypical antipsychotic that promotes oligodendroglial differentiation and remyelination via upregulation of oligodendrocyte transcription factor 1 (Olig1).<sup>6</sup> Promotes myelin repair by inhibiting microglial activation.<sup>7</sup>

**Product No: 10-2587** 50 mg/ 500 mg/

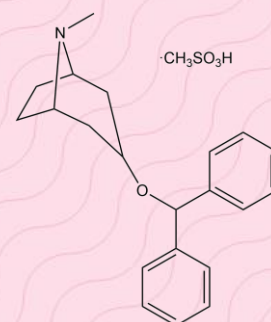
## Clemastine fumarate

Histamine H1 antagonist with anti-muscarinic effects at the M1 receptor. Enhances remyelination in a mouse model of demyelination.<sup>8</sup> Displays protective role against neuroinflammation and demyelination via anti-inflammatory and anti-pyroptotic actions.<sup>9</sup>

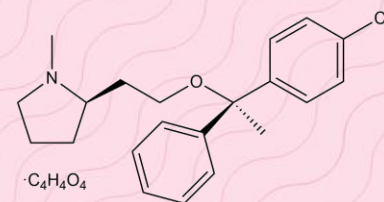
**Product No: 10-4644** 20 mg/ 100 mg/



**MDL29,951**



**Benztropine mesylate**



**Clemastine fumarate**

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## REFERENCES

1. Hennen *et al.* (2013) *Sci. Signal.* **6** ra93
2. Lecca *et al.* (2008) *PLoS One* **3** e3579
3. Ciana *et al.* (2006) *EMBO J.* **25** 4615
4. Deshmukh *et al.* (2013) *Nature* 502 327
5. Schampel *et al.* (2017) *PNAS* **114** E3295
6. Wang *et al.* (2021) *Glia* **69** 1709
7. Wang *et al.* (2015) *Front. Cell. Neurosci.* **9** 492
8. Li *et al.* (2015) *Neurosci. Bull.* **31** 617
9. Motawi *et al.* (2023) *Biochem. Pharmacol.* **209** 115435