

Neuroinflammation

Microglia have been implicated in the pathology of neurodegenerative diseases. A growing body of evidence points to activated microglia as the source of numerous factors including TNF- α , IL-1 β , NO and ROS which can promote neuronal damage.¹ Many new compounds have been discovered which can attenuate microglial activation via different mechanisms. These may lead the way to the development of a new generation of therapeutic agents for neurodegenerative diseases. Some of these new agents are listed below.

Leonurine

Inhibits microglial over-activation and attenuates A β (1-40)-induced cognitive impairments in rats via JNK and NF- κ B pathways.² Antiapoptotic activity.

Product No: 10-3193 **10 mg** **50 mg**

Vinpocetine

Reduces inflammatory IL-2 β and TNF- α expression in rat hippocampus³, displays beneficial effects in a rat model of cerebral ischemia-reperfusion injury⁴ and exerts neuroprotective effects by suppressing microglial inflammation⁵.

Product No: 10-1126 **50 mg** **250 mg**

Ibudilast

A pan-specific phosphodiesterase inhibitor, which displays protective effects on neuronal cell death induced by activated microglia.⁶

Product No: 10-2236 **5 mg** **25 mg**

Minocycline

Displays neuroprotective⁷ as well as anti-apoptotic and anti-inflammatory activities.

Product No: 10-2568 **100 mg** **500 mg**

SB-225002

CXCR2 antagonist. Inhibits leukocyte recruitment to cerebral microvessels during neuroinflammation⁸ and blocks oxidative stress-induced cellular senescence⁹.

Product No: 10-2850 **5 mg** **25 mg**

FTY720 HCl (Fingolimod)

Displays immunosuppressive effects on microglia resulting in beneficial CNS effects.¹⁰

Product No: 10-2138 **50 mg** **250 mg**

Auranofin

Reduces neuroinflammation by inhibiting microglia respiratory burst and TNF- α secretion.¹¹

Product No: 10-2373 **25 mg**

ISO-1

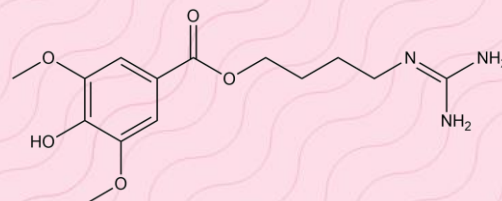
A macrophage migration inhibitory factor (MIF) antagonist. Reverses A β -induced toxicity in various neuronal cell lines.¹²

Product No: 10-1185 **5 mg** **25 mg**

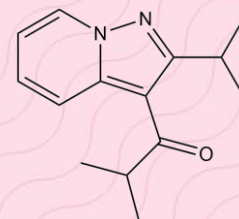
FPS-ZM1

A high affinity RAGE antagonist. Attenuates AGE-induced neuroinflammation and oxidative stress in rat microglia.¹³ Attenuates blood brain barrier damage.

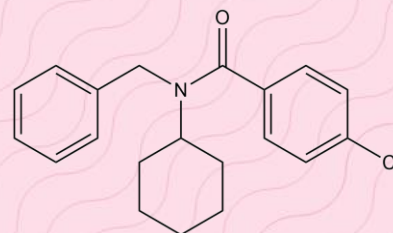
Product No: 10-4616 **10 mg** **50 mg**



Leonurine



Ibudilast



FPS-ZM1

REFERENCES

1. Lull and Block (2010), *Neurotherapeutics* **7** 354
2. Hong *et al.* (2014), *Neuroinflammation* **11** 147
3. Gomez *et al.* (2014), *J. Neurochem.* **130** 770
4. Wang *et al.* (2014), *Neuro. Sci. Lett.* **566** 247
5. Zhao *et al.* (2011), *Neuron Glia Biol.* **7** 187
6. Mizuno *et al.* (2004), *Neuropharmacology* **46** 404
7. Tikka (2001), *J. Neurosci.* **21** 2580
8. Wu *et al.* (2015), *Neuroinflammation* **12** 98
9. Shen *et al.* (2013), *Int. Immunopharmacol.* **16** 261
10. Das *et al.* (2017), *Neuropharmacology* **119** 1
11. Madeira *et al.* (2014), *J. Neuroimmunol.* **276** 71
12. Bacher *et al.* (2010) *Mol. Med.* **16** 116
13. Shen *et al.* (2017) *Neurochem. Res.* **40** 2902