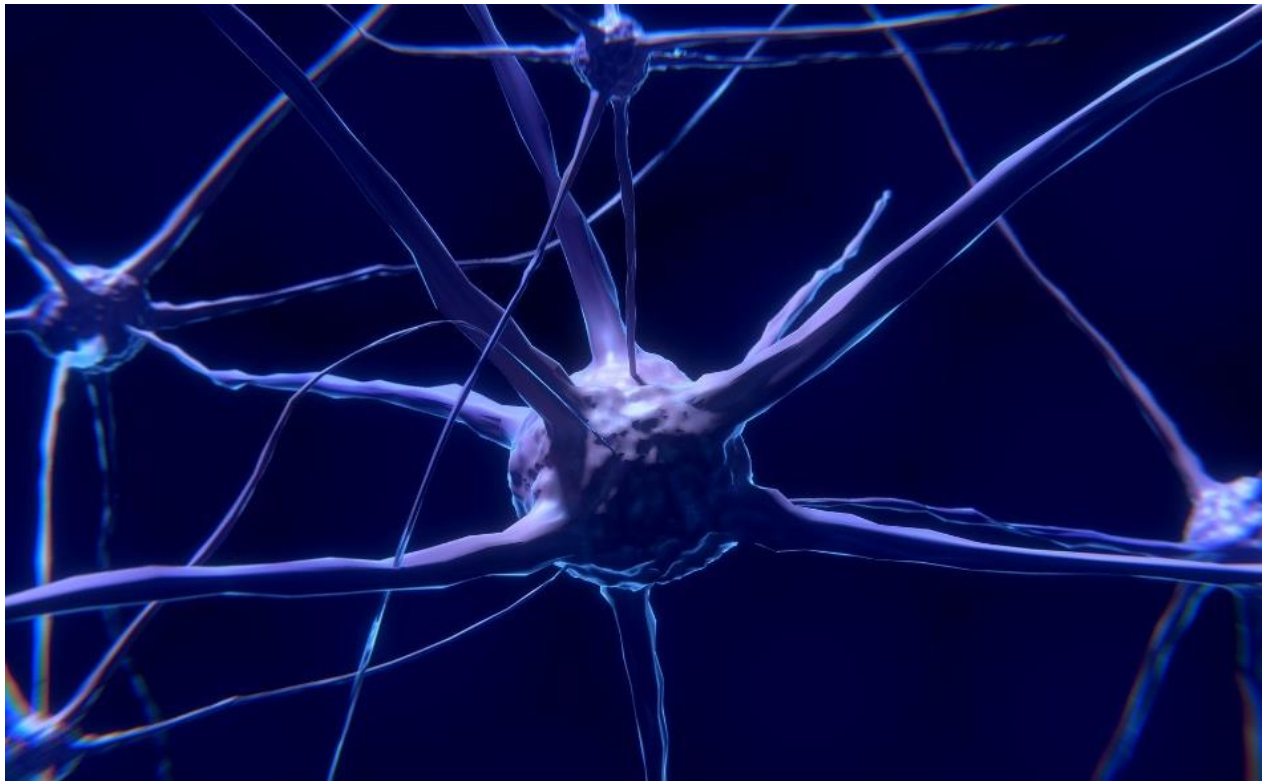
INHIBITOR COMPOUNDS NEURODEGENERATION AND TUMORS



The inhibition of the monoacylglycerol lipase enzyme (MAGL), naturally present in many brain cells and involved in physio-pathological processes, has a high therapeutic potential: neurodegenerative inflammation pathologies and tumors could be treated with new reversible inhibitory compounds, which would reduce the side effects of the irreversible inhibitors tested so far.

PRIORITY NUMBER:

102020000007150

KEYWORDS:

Cancer treatment

Neurodegenerative inflammations

Monoacylglycerol lipase

Inhibitors

Endocannabinoid system

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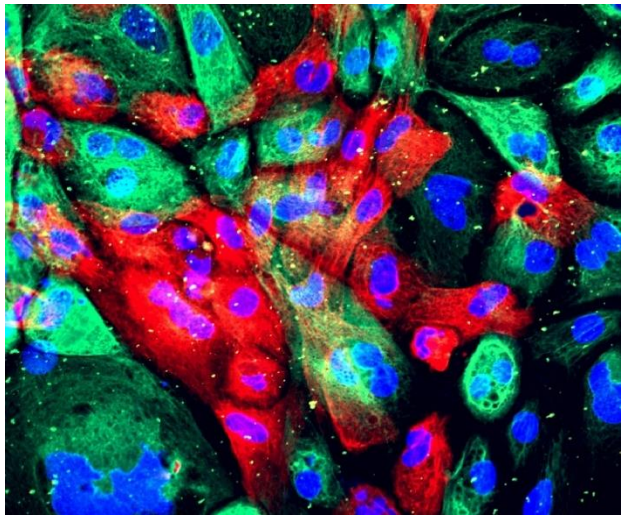

DESCRIPTION:

Monoacylglycerol lipase (MAGL) is a human enzyme of the endocannabinoid system involved in numerous physio-pathological processes (regulation of inflammation, anxiety, immune modulation, motor coordination ...), yet its overexpression/upregulation can cause neuroinflammatory diseases and tumors. The inhibition of MAGL for therapeutic purposes has been studied so far with irreversible inhibitors, which however nullify the enzyme activity, leading to a progressive loss of the therapeutic effect and to addiction phenomena. On the contrary, the new-patented compounds based on a strong non-covalent reversible mechanism of action avoid the side effects mentioned. Effective in laboratory on various tumor cell lines (e.g. colorectal, breast and ovarian cancer), they could also treat other MAGL-mediated pathologies (neuroinflammation/degeneration, pain, amyotrophic multiple/lateral sclerosis, Alzheimer's disease, Parkinson's disease).

ADVANTAGES:

- Temporary nature and reversibility
- Drastic reduction of side effects
- High efficacy tested on tumor cell lines
- Exploitable to treat numerous neurodegenerative diseases
- One of the few non-covalent reversible MAGL inhibitors with high efficacy

APPLICATIONS:

- Innovative and less harmful pharmaceutical compositions for the treatment of serious neurodegenerative pathological conditions
- Innovative and less harmful pharmaceutical compositions for cancer treatment