

Analgesic drug to treat neuropathic pain induced by chemotherapies



HEALTH
NEUROLOGY

ERADICATE NEUROPATHIC PAIN WITH EXPECTED REDUCED SIDE-EFFECT

Oxaliplatin-based cancer treatments induce neuropathic pain which can lead to decrease or stop treatment, with the risk of limiting the effective clinical outcome. Current treatments for this pain display side-effects and weak efficiency.

Described here is a new asset that consists in :

1 | Repurposing of **Donepezil**, a centrally active acetylcholinesterase inhibitor initially prescribed in Alzheimer's disease as a solution to cure neuropathic pain induced by neurotoxic chemotherapies.

2 | Reduction of associated comorbidities



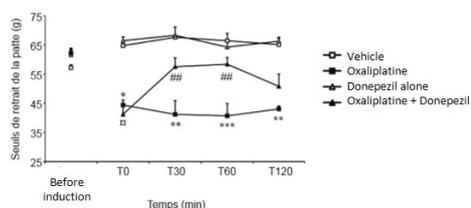
Competitive Advantages

- Response to unmet therapeutic need
- Attractive to speed up drug development
- Contribute to life quality improvement
- Preventive and curative analgesic effects
- Non-opioid

Development Status

- **In vivo POC** in oxaliplatin induced neuropathic rat models
- **Validation of the MoA** based on key role of muscarinic M2 receptors in Donepezil-induced antinociception

Von Frey mechanic allodynia assay on oxaliplatin-induced neuropathic mouse model



Curative effect of orally administrated Donepezil (5mg/kg, 2 times a day) on cold allodynia induced by oxaliplatin in rats. Western blot of the expression of M2 receptor proteins in the left posterior insular cortex of oxaliplatin-treated rats compared with matched controls (B).

Business Opportunities

- Chronic pain Treatment : in combination of cancer chemotherapy to prevent/suppress drug-evoked neuropathies

#Keywords

Neuropathic pain
Drug repurposing
Acetylcholinesterase inhibitor
Donepezil

Research Team

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Partnership

Licensing or co-development

Intellectual Property

FR3018689 / WO2015140265
Priority filing in 2014
Requests filed in EP / US / CA / JP / IS

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