Analgesic drug to prevent neuropathies induced by chemotherapies

HEALTH
NEUROLOGY

PREVENTION OF NEUROPATHIC PAIN WITH EXPECTED REDUCED SIDE-EFFECT

Chemotherapy-induced peripheral neuropathic pain is a major public health problem because available treatments produce incomplete relief, and have dose limiting side effects.

Our research team has developed a new asset that consists in :

1 | Repurposing of **Riluzole**, a non-selective TREK1 activator with known neuroprotective action initially prescribed in amyotrophic lateral sclerosis (ALS) as a solution to prevent and cure neuropathic pain induced by neurotoxic chemotherapies.

2 | Reduction of associated comorbidities

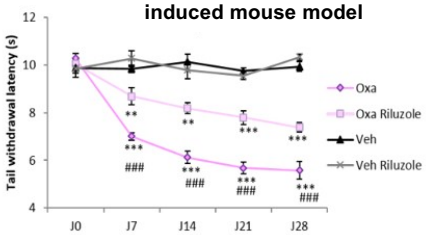
Competitive Advantages

- Response to unmet therapeutic need
- Attractive to speed up drug development
- Contribute to Health-Related Quality of Life improvement
- Non-opioid preventive pain relief

Development Status

- ***In vivo* POC** in oxaliplatin, taxane and vinca-alkaloïds induced neuropathic mouse and rat models. Also, Riluzole didn't affect the anticancer effect of oxaliplatinin the mouse model of colorectal cancer (ApcMin)
- Validation of a **MoA** based on TREK1 channel activation and inhibition of synaptic glutamate release without affecting the antineoplasic properties
- **Ongoing Clinical Phase II**, multicenter, randomized, double-blind, placebo-controlled clinical trial on 210 patients with stage II/III colorectal cancer

Cold hyperalgesia on oxaliplatin-induced mouse model



Riluzole appeared as a treatment both for improving painful symptoms (cold hyperalgesia) and for sensory disorders, locomotor disorders, and improvement of some comorbidities such as depression. TREK-1 channel seemed involved in all symptoms related to chronic neuropathy.

Business Opportunities

- **chronic pain treatment** : in combination of cancer chemotherapy to prevent/suppress drug-evoked neuropathies

#Keywords

Neuropathic pain
Drug repurposing
TREK1 activator
Riluzole

Research Team

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Partnership

Licensing or co-development

Intellectual Property

FR2957077 Granted / WO2011107710
Priority filing in 2010
Granted US/CN/EP/CA and filing IN

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