



Therapeutic chemistry

Inflammatory and neurological diseases

Keywords:

Agonist

Antagonist

Sigma-1

Inflammatory
and neurological
pathologies

NEW AGONIST AND ANTAGONIST FOR SIGMA-1 RECEPTOR

The Sigma-1 receptors ($\sigma 1R$) correspond to a single class of transmembrane Receptors located into endoplasmic reticulum. Expressed in the central nervous system and more particularly in neurons and oligodendrocytes, these receptors are known to be involved in the regulation of many neurotransmitters and diseases such as neurodegenerative diseases, cancer, inflammatory diseases, pain and neurological diseases.

Two new families of molecules with a new structure demonstrated *in vitro* efficacy, selectivity and low cytotoxicity. *In vivo* results confirm the therapeutical potential of these new families.

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➔ BENEFITS:

New families of ligands for Sigma-1 receptors with a good affinity and selectivity.

The synergistic effect of Sigma-1 receptors (neuro-protection, degeneration, inflammation) is leading to a putative therapeutic impact in neurodegenerative and inflammatory diseases.

➔ APPLICATIONS:

The potential applications are numerous, particularly in the treatment of pathologies such as:

- Multiple sclerosis,
- Alzheimer's disease,
- Epilepsy,
- Schizophrenia,
- Inflammatory diseases,
- Pain ...

➔ DEVELOPMENT STATUS:

Preclinical phase: *in vivo* proof of concept (mouse model)

Optimization of a functional test for drug candidates on BIACORE

➔ INTELLECTUAL PROPERTY:

Filing patent pending