

## New therapeutic cannabidiol derivatives

CSIC, Temple University, and the University of North Carolina Greensboro have developed pyrazolylbenzene-1,3-diols for diseases associated with G protein-coupled receptor 18 (GPR18) and in combination with transient receptor potential vanilloid 1 (TRPV1) potentially useful against a wide range of disorders.

Industrial partners from the biotech or pharmaceutical industry are being sought to collaborate through joint development and patent license agreement.

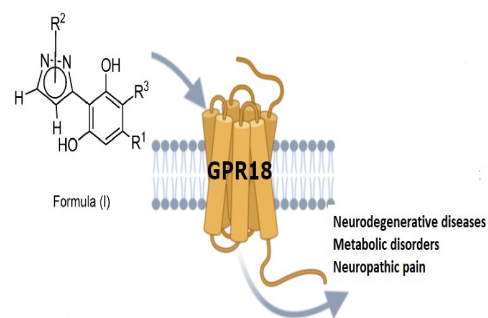
### An offer for Patent Licensing

#### New set of active molecules

The invention relates to new cannabidiol derivatives useful for therapy and/or prophylaxis related to GPR18 and TRPV1 associated diseases. The compounds preferentially modulate the activity of GPR18 or have dual activity on GPR18 and TRPV1.

GPR18 is a G Protein-coupled receptor related to the endocannabinoid system. Its expression distribution pattern suggests a potential role of GPR18 in the immune system activity, in particular in microglial migration, pro-inflammation and cytotoxicity implicated in several neurodegenerative diseases, including multiple sclerosis and Alzheimer's disease. GPR18 has also been proposed as novel therapeutic target for metabolic disorders such as obesity and diabetes, glaucoma disease, cardiac function improvement, and neuropathic pain.

The transient receptor potential vanilloid 1 (TRPV1) is a cation channel with high permeability for  $\text{Ca}^{2+}$ . TRPV1 is involved in sensory and pain perception. It also plays a role in diabetes mellitus type-2 disorders, and neurological and psychiatric disorders such as epilepsy, anxiety, depression, and drug-addiction disorders.



Scaffold modulating the activity of GPR18

#### Main innovations and advantages

- GPR18 receptor is involved in the immune system, infections leading to acute inflammation process, metabolic disorders and organ protection, including protection against neurodegenerative diseases and cancer protection. Activation of GPR18 lowers intraocular pressure and improves cardiac function.
- TRPV1 is a receptor involved in sensory and pain perception, and plays a role in diabetes T-2 and psychiatric and neurological disorders.
- This new set of cannabidiol derivatives are more potent than natural or endogenous cannabinoids

#### Patent Status

Priority patent application filed suitable for international extension

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