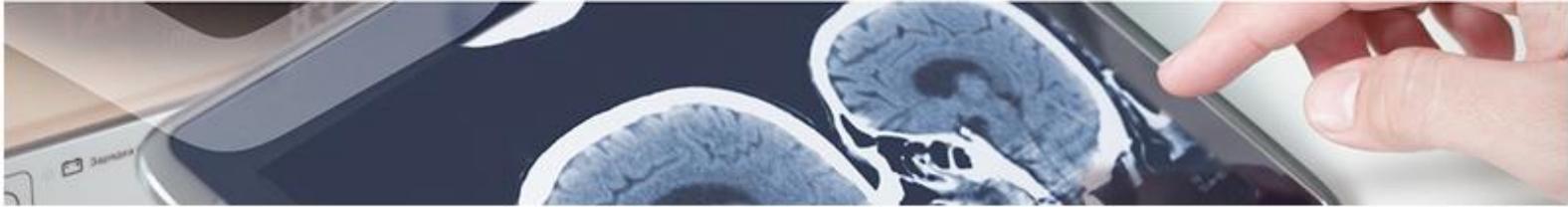


## Therapies

# Antioxidant composition for the treatment of fragile x syndrome

A research group of the Andalusia Public Health System has developed a novel composition for the treatment of cognitive and behavioural disorders associated with fragile X syndrome.



## Description

Fragile X syndrome (FXS), known also as Martin-Bell syndrome, is an inherited disorder that causes intellectual disability, as well as other associated characteristics. FXS is caused by a mutation in the gene FMR1 which causes the absence of its functional protein, FMRP. The absence of FMRP affects the expression of proteins involved in the cells' redox function. The physiopathology of the central nervous system in FXS has demonstrated that FXS is associated with an excess of NADPH oxidase-dependent free radicals, and a high level of oxidative stress in the brain. Currently, there is no specific treatment capable of normalising the development of people affected by FXS: pharmacological treatments are generally symptomatic, and do not delay manifestation of the disorder.

The new composition counteracts the production of the said free radicals by reducing oxidative stress, while improving the behavioural and cognitive performance of FXS patients.

3. Preclinical studies in mice affected by FXS have demonstrated a reversal of the biochemical effects caused by the disorder at the cellular level, as well as a reversal of certain behavioural and cognitive symptoms.
4. The product has undergone phase I and II clinical trialling, enabling the research group to determine the therapy's efficacy, safety and dosage.
5. Currently, it has also been completed phase III clinical trial, demonstrating efficacy in treating the cognitive and behavioral symptoms without adverse effects detected.



## Intellectual Property

This technology is protected by patent.



## Advantages

1. Production of this new composition does not require complex manufacturing processes and its industrial scale-up does not pose a hindrance to the technology's development.
2. The molecules that make up the composition are available commercially, are commonly used in the clinical setting and are not subject to third-party protection rights.



## Aims

We are looking for a partner interested in a license and/or a collaboration agreement to further develop and exploit this innovative technology.



## Classification

Area: Biotech-Pharma (Therapy)

Pathology: Central Nervous System