

NEW ANTISENSE OLIGONUCLEOTIDE-BASED TREATMENT FOR MSI2 SILENCING

DESCRIPTION OF THE TECHNOLOGY

MSI2 overexpression has been associated with the progression of various neuromuscular and oncological diseases. In conditions such as myotonic dystrophy type 1 (DM1), myotonic dystrophy type 2 (DM2), and certain limb-girdle muscular dystrophies, MSI2 contributes to functional impairment and loss of muscle mass. Likewise, elevated MSI2 levels have been associated with increased aggressiveness and poorer prognosis in different types of cancer. Currently, there are no commercially available therapies specifically targeting MSI2 silencing using antisense oligonucleotides.

Researchers from INCLIVA and the Universitat de València (UV) have developed a novel antisense oligonucleotide targeting MSI2 silencing, with potential for the treatment of diseases associated with its overexpression. Researchers from INCLIVA and the Universitat de València (UV) have developed a novel antisense oligonucleotide targeting MSI2 silencing, with potential for the treatment of diseases associated with its overexpression.

MSI2 inhibition has shown promising results in experimental models of neuromuscular and oncological diseases, positioning

this technology as a novel therapeutic strategy with potential for development across different indications.

APPLICATION

Health / Pharmaceutical and biotechnology industry

Health / Neuromuscular diseases and oncology

COLABORATION SOUGHT

Pharmaceutical or biotechnology companies interested in licensing or co-development agreements to advance the preclinical and clinical development of the technology and its subsequent commercial exploitation.

ADVANTAGES

- ✓ First therapeutic approach targeting the specific silencing of MSI2 using antisense oligonucleotides.
- ✓ Greater stability and biological efficacy due to the incorporated chemical modifications.
- ✓ Potential reduction in toxicity compared with other therapeutic approaches.
- ✓ Potential application across multiple neuromuscular and oncological diseases.
- ✓ Novel therapeutic target with the potential to reverse alterations associated with muscle mass loss and tumor progression.

STATE OF DEVELOPMENT

The technology is currently at the proof-of-concept stage, with promising results in experimental models of neuromuscular and oncological diseases. Further preclinical development is required to validate its efficacy and safety before clinical evaluation.

INTELLECTUAL PROPERTY RIGHTS

National patent EP26382306, filed on March 9, 2026. Jointly owned with the Universitat de València (UV)



CONTACT

INCLIVA Innovation Unit

+34 961 628 922 / 961 628 923

innovacion@incliva.es