

# Candidate of therapeutic drug for muscular dystrophy

## Metformin helps to repair skeletal muscle!

### Overview

During sarcolemma repair process, dysferlin protein accumulates at injury part. Dysferlin gene mutation is found in dysferlinopathy, which is a type of muscular dystrophy. Inventors have shown that AMPK, which regulates energy metabolism, binds membrane repair protein dysferlin. Administration of metformin, one of the AMPK activator, improves cell membrane repair in dysferlinopathy.

This invention proposes to use metformin, well known therapeutic drug for diabete, as an activator of sarcolemma repair, and to use it as a therapeutic drug for muscular disease such as muscular dystrophy and various diseases that present cell membrane fragility.

### Product Application

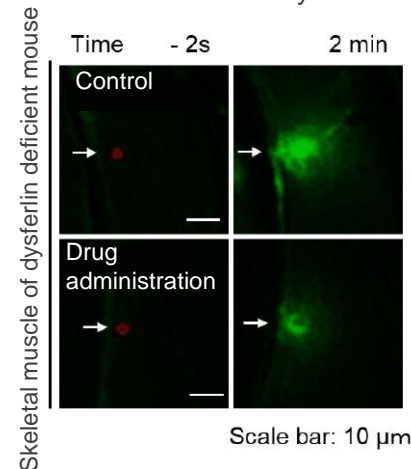
- ☐ Dysferlinopathy (muscular dystrophy) therapeutic drug
- ☐ Myopathy therapeutic drug

### IP Data

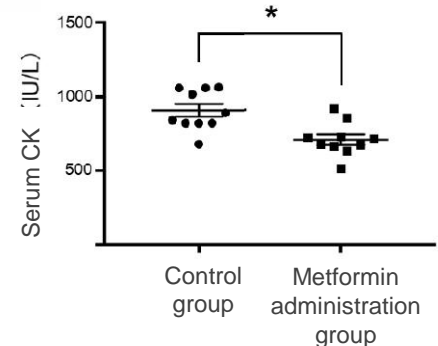
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### Features・Outstandings

Metformin improved membrane repair function of skeletal muscle of dysferlin deficient mouse



Administration of metformin to dysferlin deficient mouse improved abnormal high serum CK level and muscle pathology



### Related Works

[1] Molecular Therapy Vol. 28 No 4 April 2020

### Contact