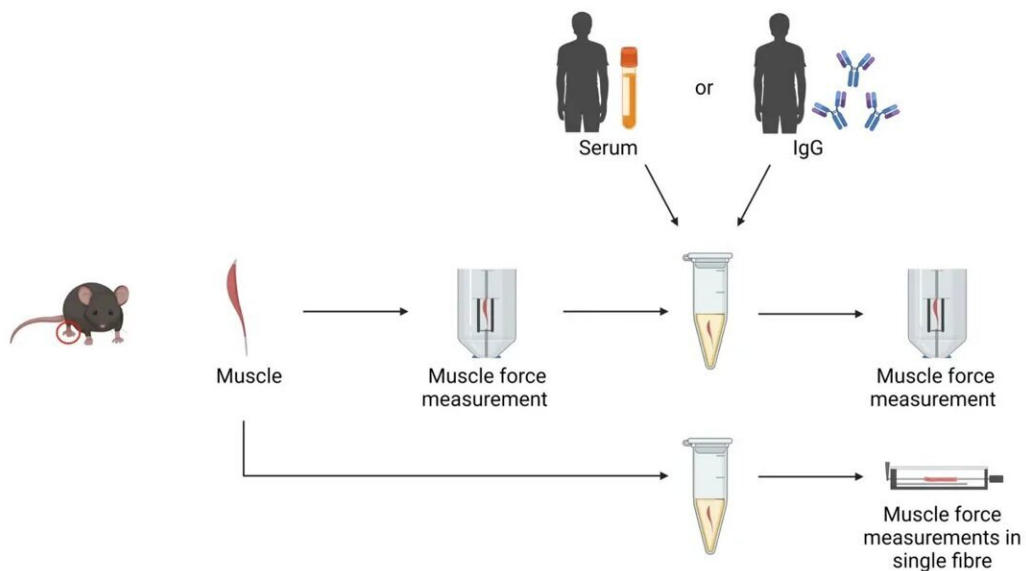


Study uncovers key factors in myositis-induced muscle weakness

September 6 2024



Description of the experiment platform used in the study. Credit: Cecilia Leijding et al

A study has shed new light on the mechanisms behind idiopathic inflammatory myopathies (myositis), a group of systemic autoimmune

disorders known for causing severe muscle weakness, fatigue, and increased mortality.

Researchers have discovered that serum from myositis patients directly affects [skeletal muscle](#), leading to weakness, independent of immune cell infiltration or involvement of the nervous and vascular systems.

[This study](#), for the first time, demonstrates that non-cellular factors in the blood of myositis patients impair [muscle function](#). It is published in *Annals of the Rheumatic Diseases*.

Using a unique humanized test platform that measures contractile force in isolated murine muscles under exposure to human serum, researchers found that the muscle weakness can be caused by myositis serum, but not by autoantibodies, challenging previous hypotheses in the field.

The findings highlight the need to identify the specific factors in the serum responsible for muscle dysfunction, and what factors within the muscle that leads to the myositis weakness. The research team is now focused on investigating potential serological factors and developing pharmacological strategies to prevent serum-induced [muscle weakness](#) by enhancing muscle stress resistance.

This discovery marks a significant step forward in understanding myositis and opens new avenues for treatment and management of this deadly and debilitating condition.

More information: Cecilia Leijding et al, Serum from patients with idiopathic inflammatory myopathy induces skeletal muscle weakness, *Annals of the Rheumatic Diseases* (2024). [DOI: 10.1136/ard-2024-225912](#)

Provided by Karolinska Institutet

Citation: Study uncovers key factors in myositis-induced muscle weakness (2024, September 6) retrieved 7 September 2024 from <https://medicalxpress.com/news/2024-09-uncovers-key-factors-myositis-muscle.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.