

[Home](#) › [InVivo Biosystems Blog](#) › [\[Review\] The Human Avatar](#)

[Review] The Human Avatar

[Disease Modeling, Gene Editing](#) / By [Yoanne Clovis, Ph.D.](#)

How worms with muscular dystrophy are helping cure sick children

A clinically relevant strain of *C. elegans* mirrors both muscular dystrophy pathology and response to drugs



The Human Avatar:

How worms with muscular dystrophy are helping cure sick children

A Review

A clinically relevant strain of *C. elegans* mirrors both muscular dystrophy pathology and response to drugs

Summary

Knowledge acquired in animal models can be demonstrably extrapolated to human conditions when certain criteria are set and adhered to at the earliest stage - specifically, during model selection or building. *C. elegans*' simplicity, as well as its high tractability both on a genomic and phenotypic level, make this tiny nematode a very powerful model for early stage translational research. Here we discuss the *C. elegans* mutant *dys-1(eg33)*, which recapitulates

many salient phenotypes of Duchenne Muscular Dystrophy (DMD), including loss of mobility, muscle necrosis, early pathogenesis, increased lethality, and the improvement of several muscular parameters with increased physical activity. The high degree of genetic conservation and phenotypic similarities between dystrophic worms and DMD patients provides a unique opportunity to gain insight into the etiology of the disease, and perform initial assessments of potential treatment strategies. We discuss multiple criteria that make *C. elegans* a clinically relevant model for DMD.

CATEGORIES

[17 Minutes of Science](#)

[Aging & Healthspan](#)

[CRISPR](#)

[Disease Modeling](#)

[Drug Discovery](#)

[Drug Toxicity](#)

[Gene Editing](#)

[News &](#)

[Announcements](#)

[Newsletter](#)

[View from the Bench](#)

NemaMetrix is the market leader for early preclinical *in-vivo* testing using small animal models such as *C. elegans* and zebrafish to gain a better understanding of the efficacy, mode of action, toxicity and potential targets for novel compounds.

Download the Review

Share this article

Share 0

Tweet



← Previous Post

Next Post →



Right Model. Right Test. Right Insights.

Search

In Vivo Solutions

- Lifespan & Healthspan Analysis
- In Vivo Toxicity Testing
- Custom In Vivo Testing

CRISPR Model Creation

- C. elegans* Transgenic Services
- Zebrafish Genome-Editing Services
- Humanized Models

Products

- Instruments
- Reagents
- Wormflow Software
- Consumables

Capabilities

Blog

Our Company

- About Us
- Our Team
- Our Values

Resources

- HElio Ortholog Gene Finder
- Disease Gene Finder
- Scientific Posters
- Video Gallery
- Product Documents
- Publications
- Return & Warranty Policy

Contact

- Product & Service Inquiries
- Technical Support Inquiry
- Contact Us
- Jobs

GDPR Policy

A Licensed CRISPR Solutions Provider.

1.844.663.8749 · support@invivobiosystems.com · Copyright © 2021 InVivo Biosystems All rights reserved. · Facebook · LinkedIn



