Mantarray™

Bringing Scalability and Automation to
Human-Based 3D Engineered Muscle Tissue Data

curi bio

Deliver Clinically-relevant Functional Data Earlier

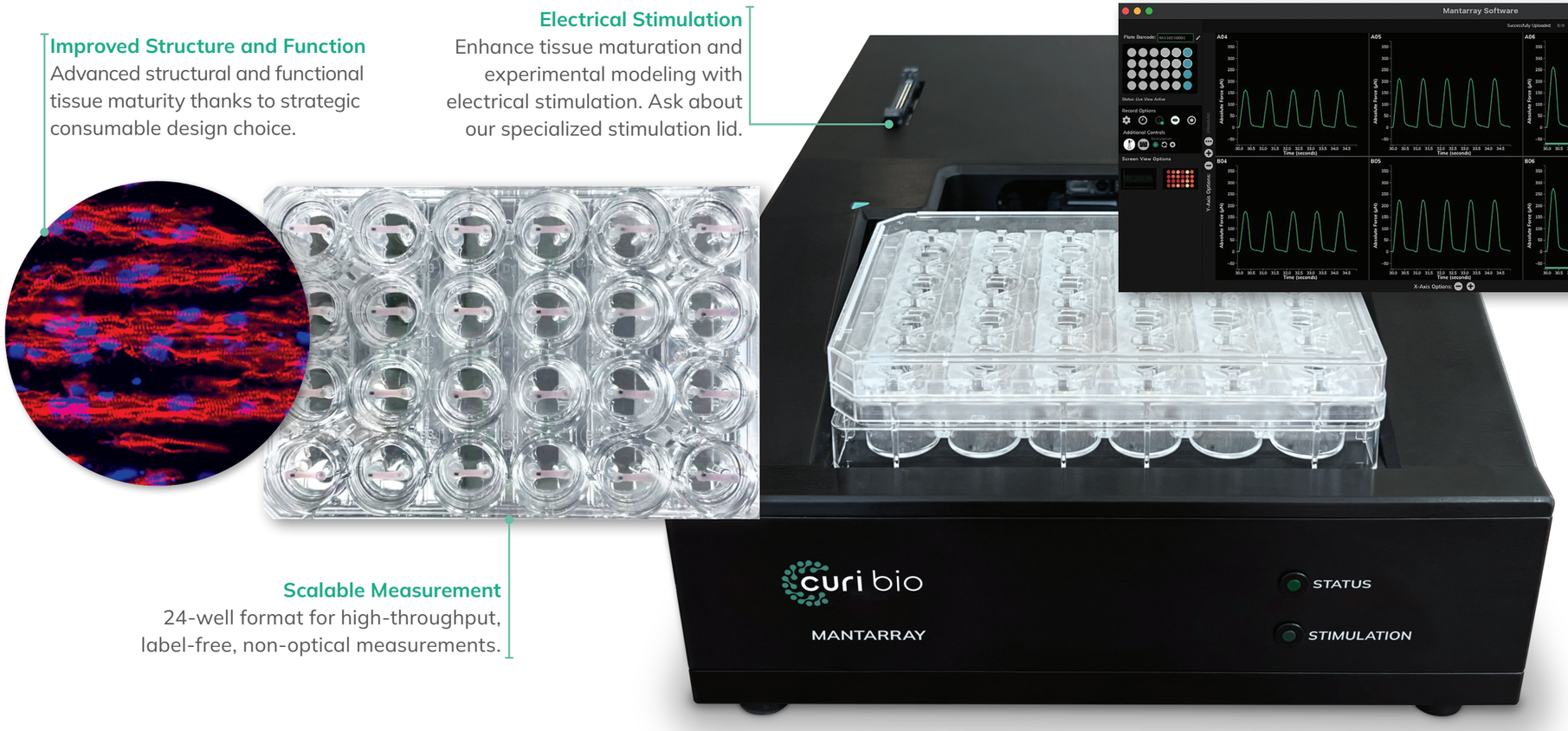
Mantarray™ Key Characteristics

Mantarray Engineered Tissues

The Mantarray platform enhances your preclinical testing pipeline with the power and throughput of engineered muscle tissues.

Improved Structure and Function
Advanced structural and functional tissue maturity thanks to strategic consumable design choice.

Electrical Stimulation
Enhance tissue maturation and experimental modeling with electrical stimulation. Ask about our specialized stimulation lid.



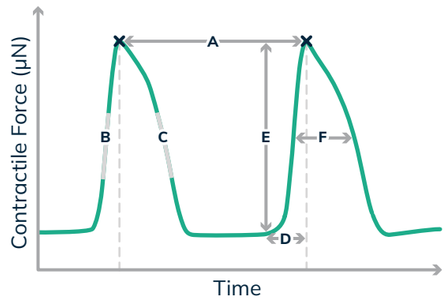
Scalable Measurement
24-well format for high-throughput, label-free, non-optical measurements.

Mantarray Software

Easily collect and analyze clinically-relevant functional data for your preclinical discovery, safety, and efficacy testing.

Simple, Intuitive Workflow
Streamlined measurements and data analysis under one GUI. No more coding, no more third party software.

Clinically-relevant Contractility Data
Powerful multidimensional data analysis with a suite of clinically relevant metrics.



A. Frequency
B. Rate of Contraction/Systole
C. Rate of Relaxation/Diastole
D. Time to Max Twitch (Peak)
E. Maximal Twitch Amplitude
F. Full Width at Half Max (FWHM)

Straightforward workflow allows you to focus on data.

1. Choose Your Cell Source
Make high quantities of engineered tissues with your preferred cell lines. Made reproducibly in the standard 24-well format of our Mantarray Casting Kit.

2. Cast Your Tissues
The cast cells spontaneously form tissues between two microscopic posts. When the tissues contract, they bend one of the posts.

3. Record Contractility Data
Mantarray Technology enables collection of contractility output from 24 tissues, in parallel, in real time, and with no cumbersome imaging and cell labeling.

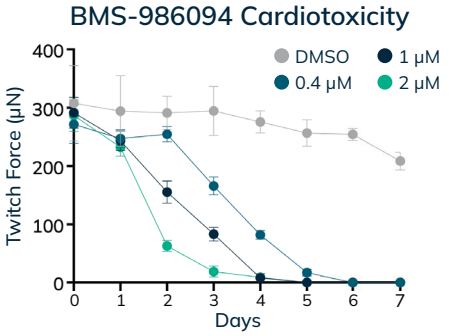
4. Analyze Your Output
User-friendly software automates data collection, analysis & display, eliminating manual calculations and delivering contractility data at the click of your mouse.

5. Combine with Existing Assays
Engineered muscle tissues can be used with virtually any assay, including electrical stimulation, fluorescent imaging, media analysis, and histology.

Safety Screening

The Mantarray™ platform measures acute and chronic effects of compounds with sufficient sensitivity to distinguish dose-dependent responses.

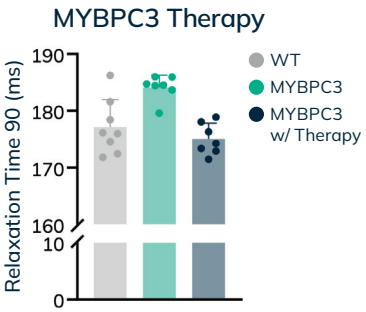
On the right, the Mantarray captures the toxicity of BMS-986094, a therapy discontinued in Phase 2 after causing unexpected off-target cardiotoxicity.



Efficacy

The Mantarray platform supports **therapeutic validation** by providing a diverse range of metrics reflecting different facets of tissue contractility and health.

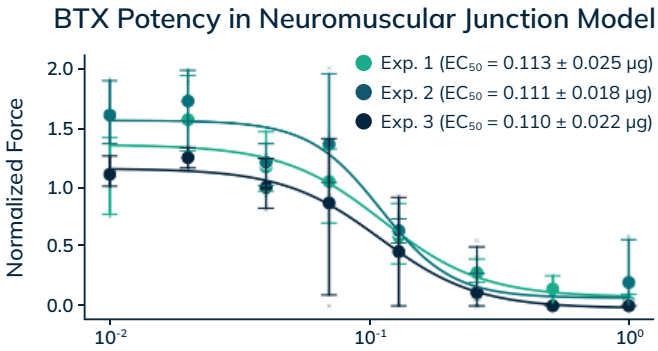
On the left, Relaxation Time 90% demonstrates **functional restoration** of MYBPC3 mutant cardiac tissues towards the expected healthy phenotype.



Potency

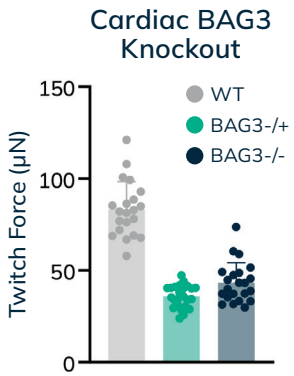
Mantarray's 24-well format enables dosing gradients within a single plate, supporting **reproducible potency assessment**.

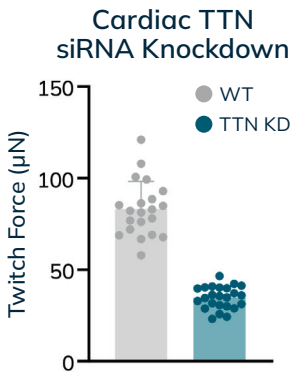
On the right, the Mantarray consistently derives the EC_{50} of Botulinum Neurotoxin (BTX) across three independent experiments conducted by different researchers.

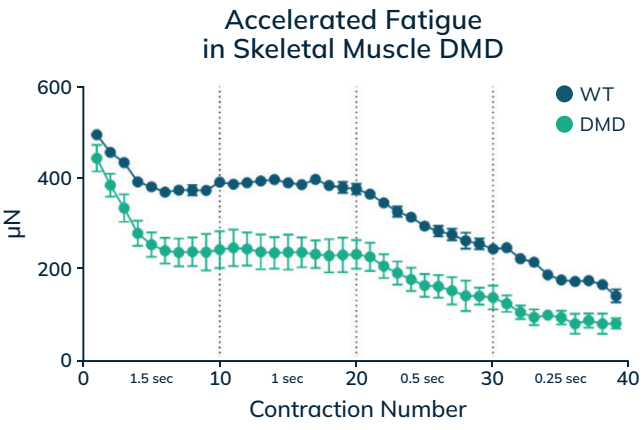


Disease Modeling

The Mantarray ecosystem supports casting and stimulation protocols adaptable to virtually any disease model involving contractile dysfunction.







©2026 Curi Bio, Inc.
marketing@curibio.com