

# Forward-Looking Statements

*Statements in and/or made by our representatives in connection with this presentation regarding future events or our future performance are forward-looking statements. We intend that such statements be protected by the Private Securities Litigation Reform Act of 1995's safe harbor. Our actual results and the timing of events may differ materially from those projected in these statements. Examples of such statements include, but are not limited to, statements relating to: our research and development programs, including plans for and the initiation, design, conduct and results of our and Amgen's clinical trials of our drug candidates, the significance of such results and anticipated timing of the availability of clinical trial data; the commercial potential for our drug candidates and market potential for our targeted indications; our financial guidance and R&D milestones; our receipt of funds and anticipated role in development and commercialization activities under our agreement with Amgen; the properties and potential benefits of our compounds, including their potential indications; and the utility of our focus on muscle function and contractility.*

*These forward-looking statements involve many risks and uncertainties that could cause actual results and the timing of events to differ materially from those projected by these statements. These risks and uncertainties include a variety of factors, many of which are beyond our control. These statements speak as of today, and you should not rely on them as representing our views in the future. We undertake no obligation to update these statements after this presentation. Please refer to our SEC filings, including our annual reports filed on Form 10-K, our periodic reports filed on Form 10-Q and our current reports filed on Form 8-K, for a more detailed description of these risks and uncertainties. Copies of these documents may be obtained from the SEC or by visiting the Investor Relations section of our website.*





# Cytokinetics' Investment Value Proposition

## *Mechanism*

**Omecamtiv  
Mecarbil**

**CK-2017357**

<b>Novel</b>	✓	✓
<b>First-in-Class</b>	✓	✓
<b>Best-in-Class</b>	✓	✓

## *Opportunity*

<b>Significant Unmet Need</b>	✓	✓
<b>Large Commercial Opportunity</b>	✓	✓
<b>Concentrated Physician Base</b>	✓	✓

## *Clinical Path*

<b>Phase II Underway</b>	✓	✓
<b>Defined Regulatory Path</b>	✓	✓

# CARDIOVASCULAR

## *Omecamtiv Mecarbil*



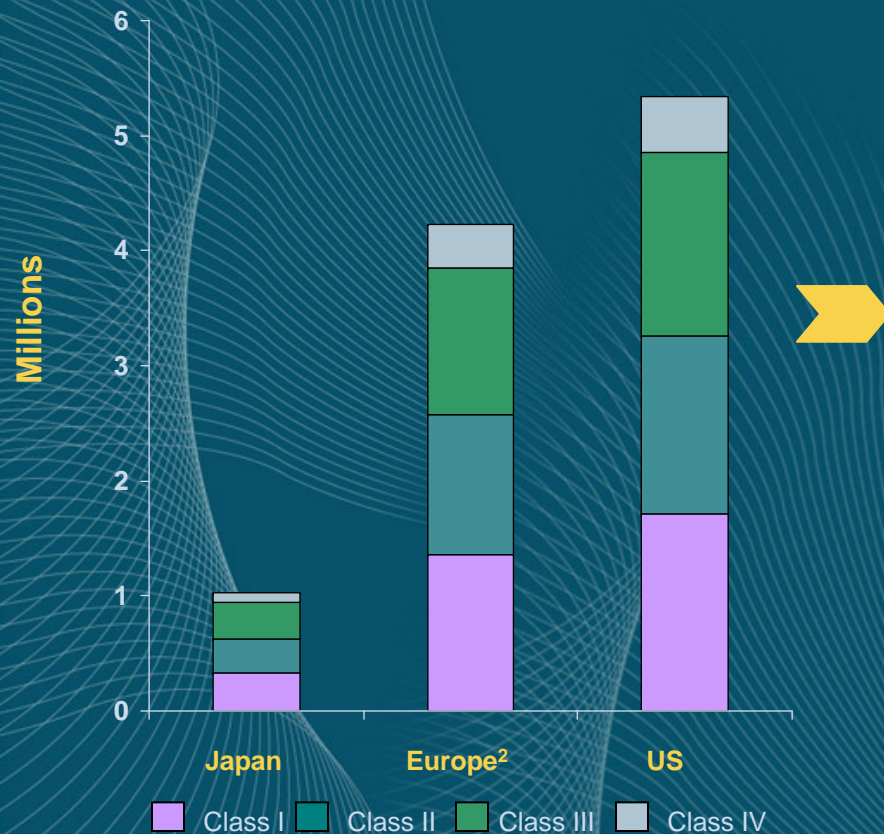
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# Heart Failure: Market Data

## Chronic

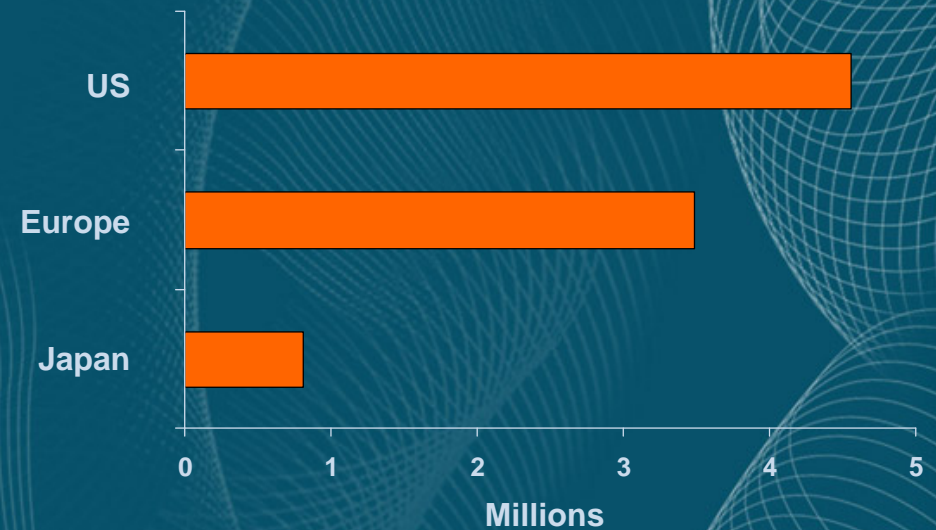
### Est. Diagnosed Prevalent Cases, 2009

(Treated cases are ~ 75% of diagnosed cases)



## Acute

### Diagnosed Events, 2009



### Mortality and Readmission in Acute Heart Failure<sup>1</sup>

Days Post Treatment	5 Days	30 Days	180 Days
All Cause Mortality	6%	14%	28%
Readmission	NA	27% <sup>2</sup>	30-40%

<sup>1</sup> Decision Resources, Mortality and Readmission data based on dobutamine arm of SURVIVE trial. Europe includes France, U.K. Spain, Italy, and Germany.

<sup>2</sup> Jencks, SJ et al. Rehospitalizations among Patients in the Medicare Fee-For-Service Program. N Engl J Med 2009; 360:1418 - 28

# *Omecamtiv Mecarbil: Plans in Heart Failure*



Potential Indication(s):

- **Reduction in death or readmission**
- **Improvement in symptoms and functional status**



# Cytokinetics - Amgen Collaboration

Amgen paid \$75 mm for option  
exercisable on Phase IIa clinical trials program  
(December 2006)

Amgen paid \$50 mm to exercise option  
gaining exclusive worldwide rights (excluding Japan)  
(May 2009)

Amgen responsible for  
development and commercialization  
subject to CK participation rights  
Cytokinetics can earn up to \$600 mm in milestone payments

**Commercialization**

Cytokinetics to receive escalating double-digit royalties  
Increased royalties through co-funding Phase III trials  
Option to co-promote co-funded products in NA  
Cytokinetics reimbursed for certain sales force costs



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# Omecamtiv Mecarbil: Phase I & IIa Clinical Trials Summary

## Phase I

Phase I Population (Study #)	N	Form	Trial Objectives	Results	Status
Healthy Volunteers (CY 1111)	34	IV	Safety and Tolerability MTD / Plasma Concentration	<u>PK</u> : Linear, Dose Proportional <u>EF</u> : Statistically Significant <u>FS</u> : Statistically Significant <u>SET</u> : Statistically Significant Well- tolerated	Announced 2006
Healthy Volunteers (CY 1011)	10	IV +Oral	Oral Bioavailability	100% Bioavailability No first-pass hepatic metabolism	Announced 2006
Healthy Volunteers (CY 1016)	12	Oral	Modified Release Pharmacokinetics	Prototype selected	Announced June 2008
Healthy Volunteers (CY 1015)	32	Oral	Single dose to multi-dose Pharmacokinetics	Dose-proportionality No gender differences	Announced June 2008
Healthy Volunteers (CY 1013)	24	Oral	Drug/Drug Interaction	Absence of metabolism by CYPs 3A4 and 2D6 had minimal effect on <i>omecamtiv mecarbil</i> pharmacokinetics	Announced December 2008

## Phase IIa

Stable Heart Failure (CY1121)	45	IV	Safety and tolerability, PK/PD dose-response	<u>Safety</u> : Well-tolerated <u>Statistically significant</u> : Stroke Volume, Fractional Shortening, Systolic Ejection Time, Ejection Fraction  Clinically relevant effects	Announced March 2009
Ischemic Cardiomyopathy (CY1221)	94	IV to Oral	Safety	<u>Safety</u> : Well-tolerated Supports progression into Phase IIb	Announced June 2009

 Intravenous administration

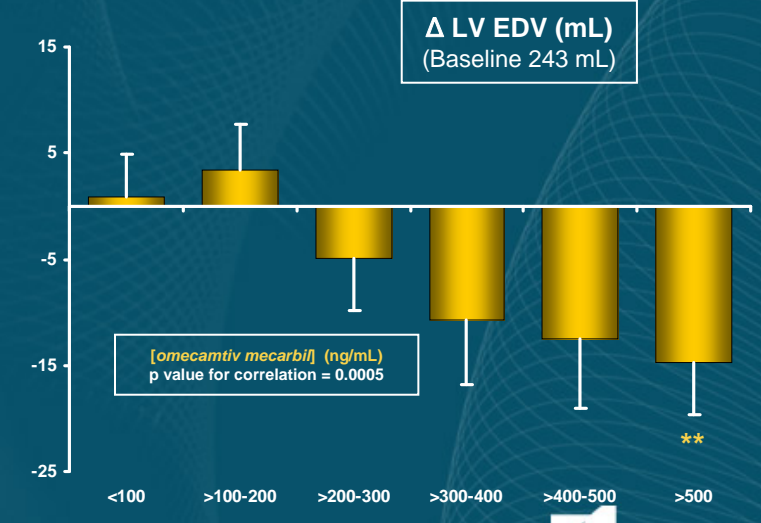
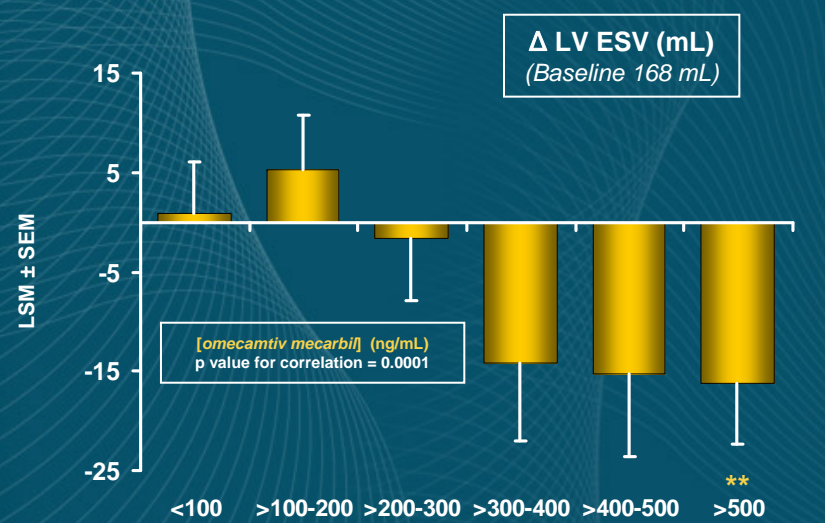
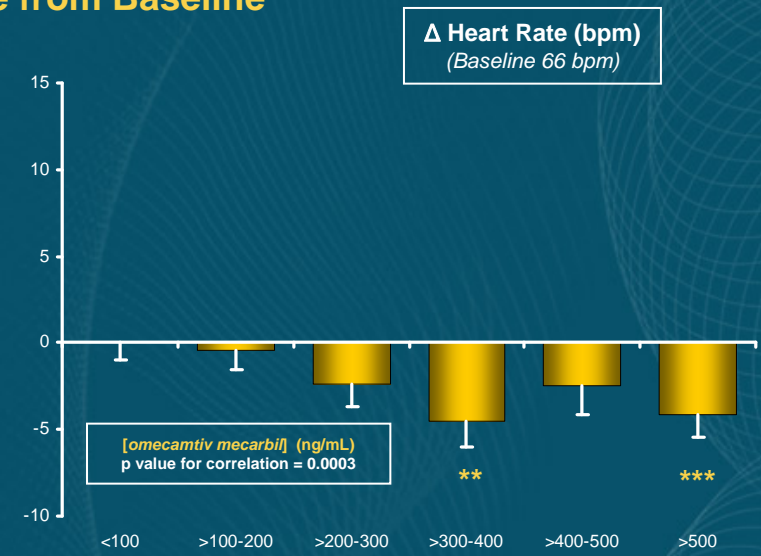
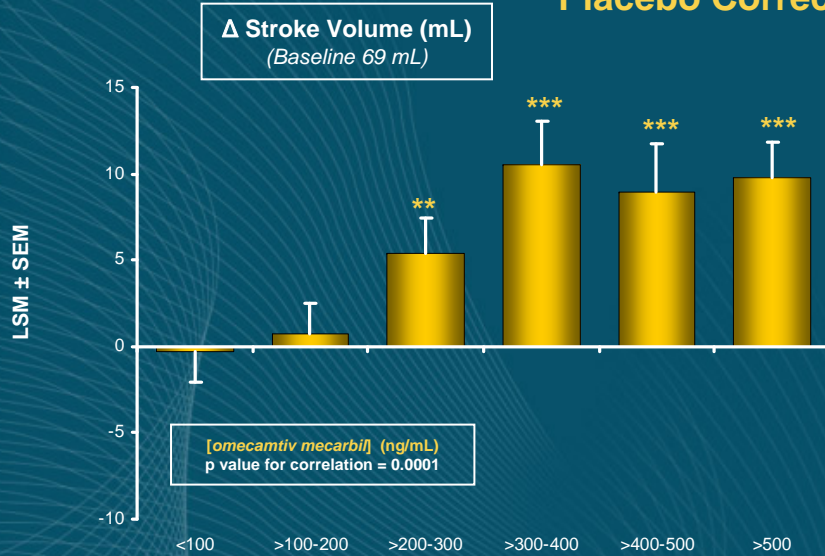
 Oral administration



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# CY 1121: Stroke Volume, Heart Rate, LVESV and LVEDV

## Placebo Corrected Change from Baseline



\* p < 0.05

\*\* p < 0.01

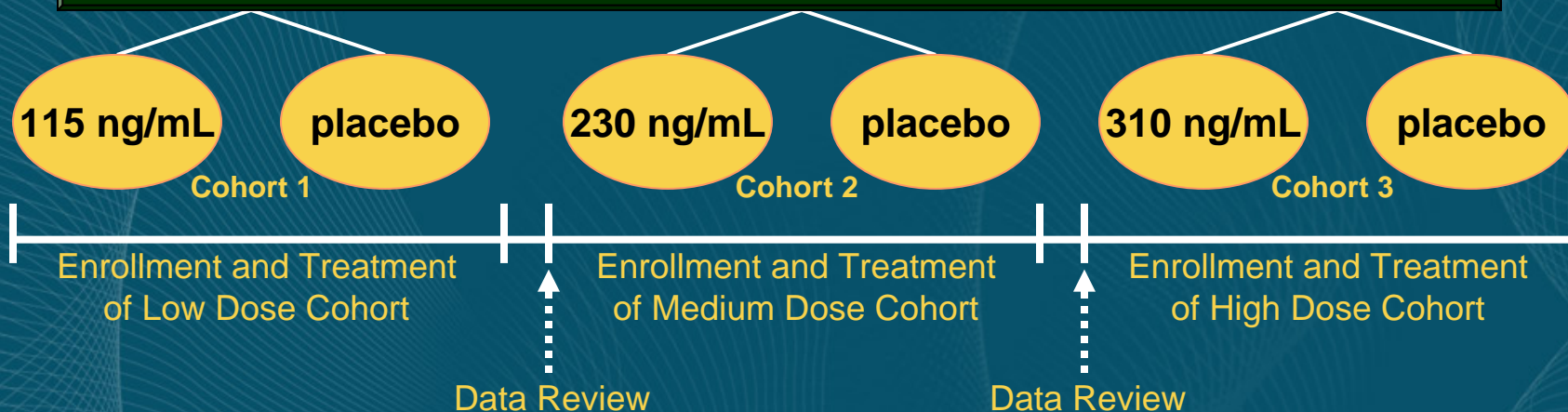
\*\*\* p < 0.001



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# Omecamtiv Mecarbil: Phase IIb Clinical Trial

~ 600 Hospitalized Acute Heart Failure Patients with Left Ventricular Systolic Dysfunction:  
Multi-center, randomized, double-blind, placebo controlled, 3 cohort trial



## Primary Objective

- Evaluate 48 hours of intravenous (IV) infusion versus placebo on dyspnea

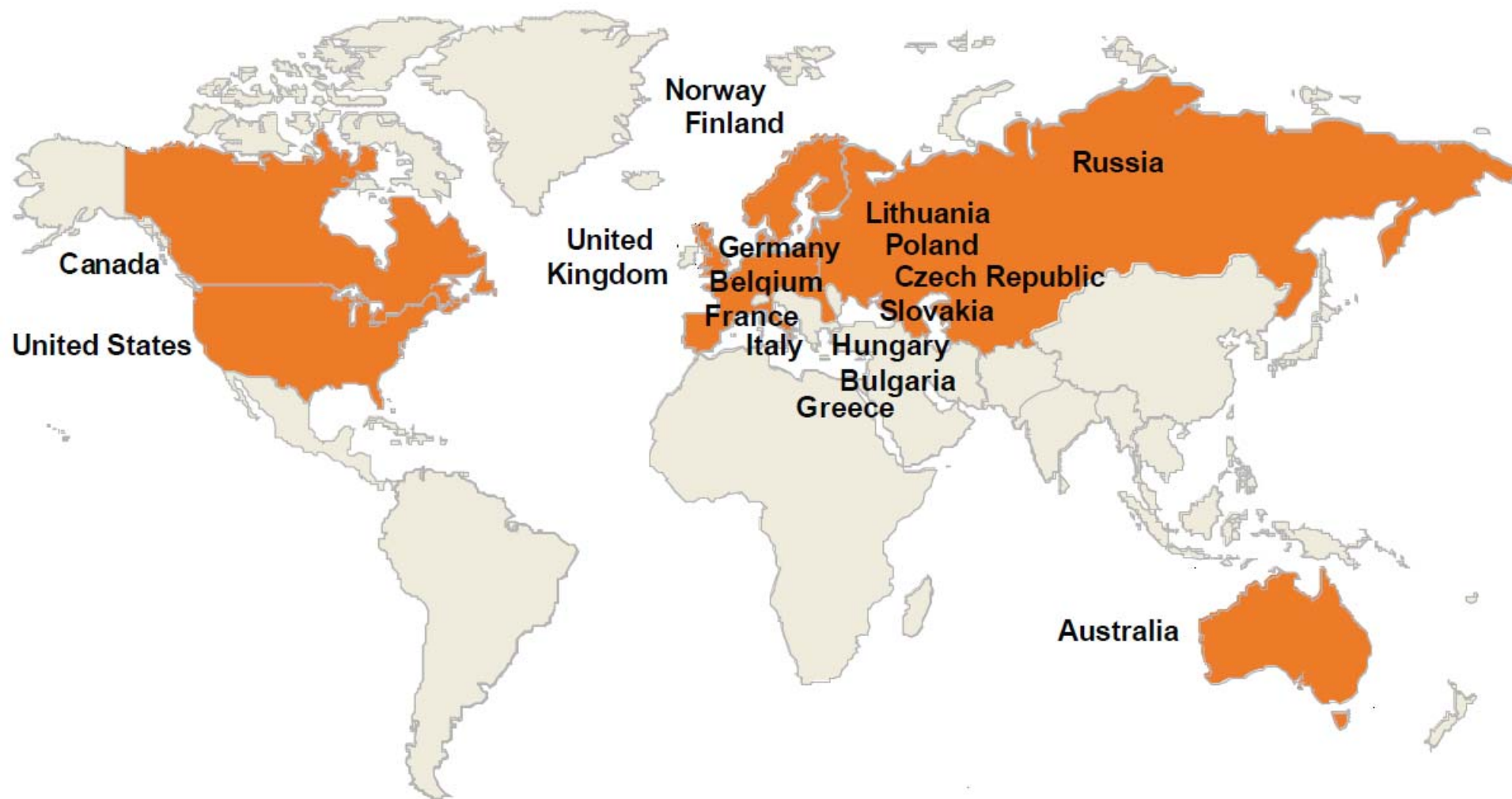
## Secondary Objectives

- Assess safety and tolerability of 3 dose levels of IV *infusion* versus placebo
- Evaluate additional measures of dyspnea, patient global assessment, change in NT-proBNP, incidence of worsening heart failure, and days alive out of hospital up to Day 30
- Characterize pharmacokinetics, including metabolites M1 and M3, following IV infusion and to evaluate plasma concentrations and echocardiographic parameters



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# Phase IIb: A Global Clinical Trial



# *Omecamtiv mecarbil*: Planned Activities

# AMGEN<sup>®</sup>



2H 2011: initiation of a Phase I study designed to investigate the safety, tolerability and pharmacokinetics of multiple oral formulations of *omecamtiv mecarbil* in healthy volunteers

# Skeletal Muscle CK-2017357



# Skeletal Sarcomere Activators: Potential Indications

Amplify The Response To Motor Neuron Input

Increase Muscle Power

Slow the Onset and Reduce the Degree of Muscle Fatigue

## Neuromuscular Disorders

### Motor Unit Disorders

- ALS
- Spinal muscular atrophy
- Post-Polio Syndrome

### Motor Neuropathies

- Guillain Barré Syndrome
- Peripheral Neuropathies

### Neuromuscular Junction Diseases

- Myasthenia Gravis
- Lambert-Eaton Syndrome

## Degenerative Muscle Disease

### Muscular Dystrophies

- Pediatric Onset - Duchenne

### Adolescent/ Adult Onset

- Becker
- Facioscapulohumeral (FSH)
- Oculopharyngeal (OPMD)

### Other Myopathies

- Inclusion Body Myositis
- Dermatomyositis / Polymyositis
- Nemaline Myopathy

## CNS Disorders with Weakness/ Fatigue

### Degenerative

- Multiple sclerosis
- Parkinson's

### CNS Damage

- Stroke
- Spinal cord injury

## Rehabilitation-related Deficits

• Immobilization/ Disuse Atrophy

• ICU Neuromyopathy

• Steroid Myopathy

• Post Trauma

## Other Disorders and Muscle Conditions

### Cachexia Syndromes

- Heart Failure
- Cancer
- COPD
- Renal Disease

### Metabolic/ Ischemic

- Claudication

### Sarcopenia

- Frailty (Aging)



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# CK-2017357: Phase I & II Clinical Trials Summary

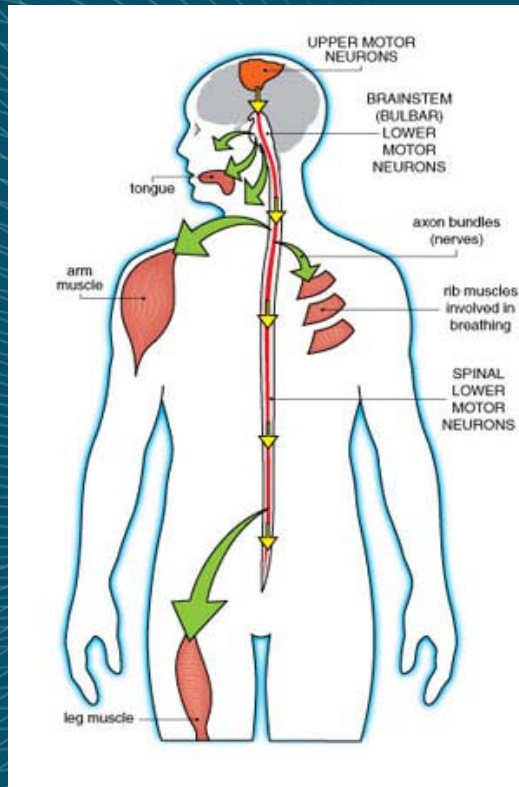
## Phase I

Population (Study #)	N	Form	Trial Objectives	Results	Status
Healthy Male Volunteers (CY 4011 Part A)	57	Oral	Assess safety and tolerability; Evaluate pharmacokinetics (increasing single doses)	MTD determined to be 2000 mg No Serious Adverse Events; Safe and well tolerated	Announced February 2010
Healthy Male Volunteers (CY 4011 Part B)	12	Oral	Assess pharmacodynamic effects	Concentration-dependent, statistically significant increases (versus placebo) in peak force; Safe and well tolerated	Announced January 2010
Healthy Male Volunteers (CY 4012)	24	Oral	Assess safety and tolerability; Evaluate pharmacokinetics (once –daily for 7 days)	Dose proportional $C_{max}$ & $AUC_{24h}$ Modest accumulation from single-dose to steady state Systemic exposures were high; low inter-subject variability No Serious Adverse Events; Safe and well tolerated	Announced January 2010
Healthy Subjects (CY 4013)	36	Oral	DDI ( <i>riluzole</i> ) and Food Effect Study; Safety and tolerability		Ongoing

## Phase II

ALS Patients (CY 4021)	67	Oral	Hypothesis generating Safety and tolerability Assess PK/PD effects	Positive changes in patients' overall status at 6 hours Improvements in SNIP, MVV and Grip Strength Endurance Safe and well tolerated	Announced December 2010
ALS Patients (CY 4024)	~24	Oral	Safety and tolerability of multiple doses over 14 days		Ongoing
Claudication Patients (CY 4022)	61	Oral	Hypothesis generating Safety and tolerability Assess PK/PD effects	Increased calf muscle performance by heel raise testing Safe and well tolerated	Announced June 2011
Myasthenia Gravis Patients (CY 4023)	~36	Oral	Hypothesis generating Safety and tolerability Assess PK/PD effects		Ongoing

# Potential in Amyotrophic Lateral Sclerosis



Source: Easton Associates, February 2008.  
Data from: The ALS Association, ALS  
Division of MD Society, Les Turner ALS  
Foundation, UN Population Census

- Progressive, fatal, neurodegenerative disease
- Clinical course is variable
- Rilutek® is the only approved treatment for ALS
- Improved function of swallowing/breathing muscles could delay gastric feeding or mechanical ventilation and prolong survival
- Current therapies do not address muscle weakness/ fatigue

## Incidence:

- ~ 5,000-8,000 new cases per year in the U.S./ 120,000 worldwide
- Increase in age-specific population growth rates: US- 2.1%

## Prevalence:

- ~ 20,000-30,000 in the U.S. and 350,000 worldwide

***“Muscle weakness is the most relevant symptom. The one they come in complaining about and the one most obvious in the illness.”***

# Patients & Investigators Perceived Improvement

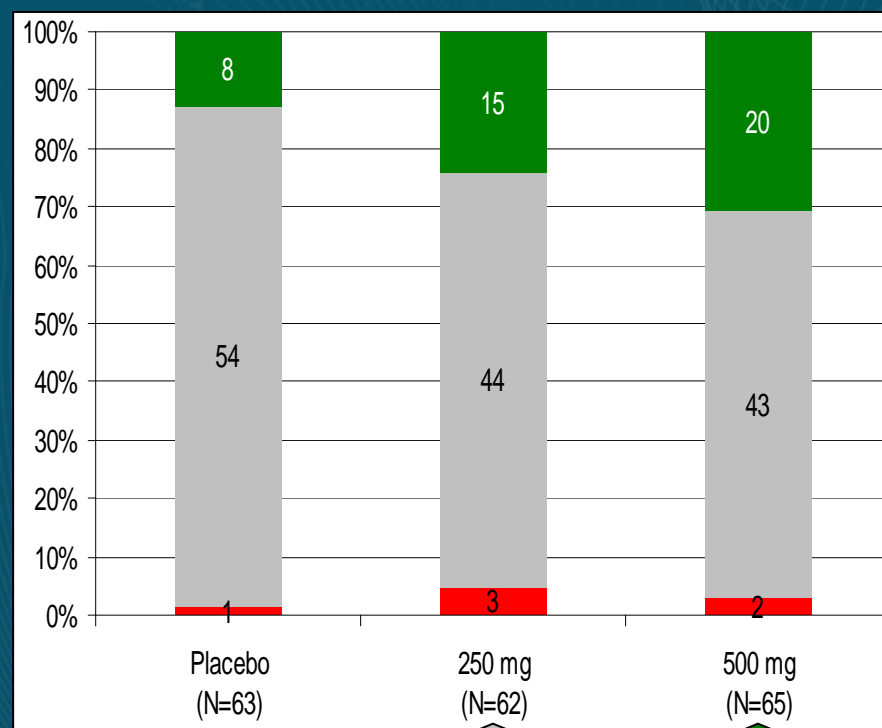
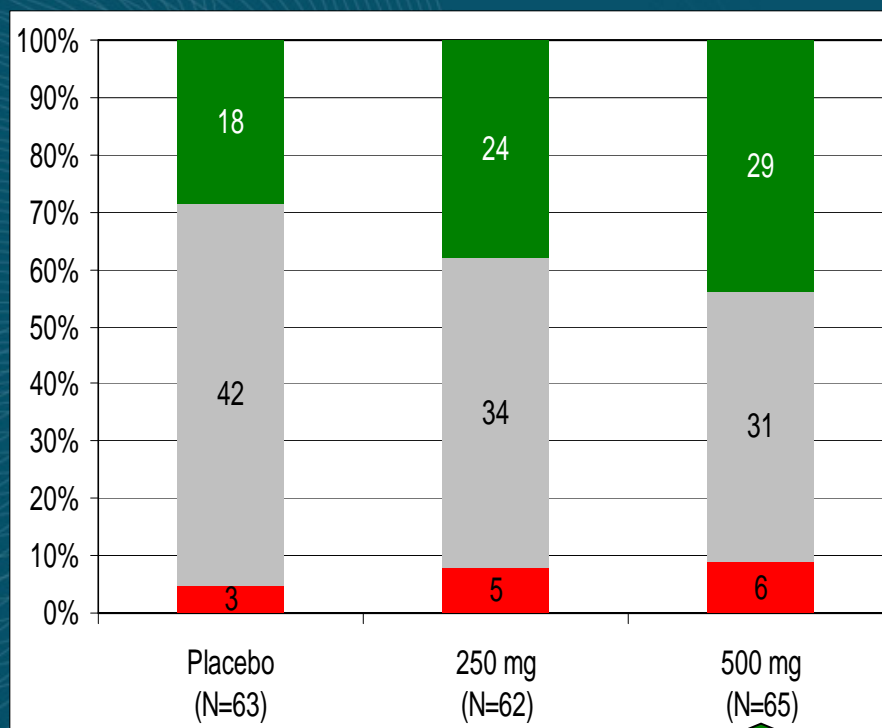
Patients

Worse Same Better

Investigators

Overall Dose Response:  $p = 0.07$

Overall Dose Response:  $p = 0.01$



CK-2017357 vs. placebo:

$p = 0.04$

CK-2017357 vs. placebo:

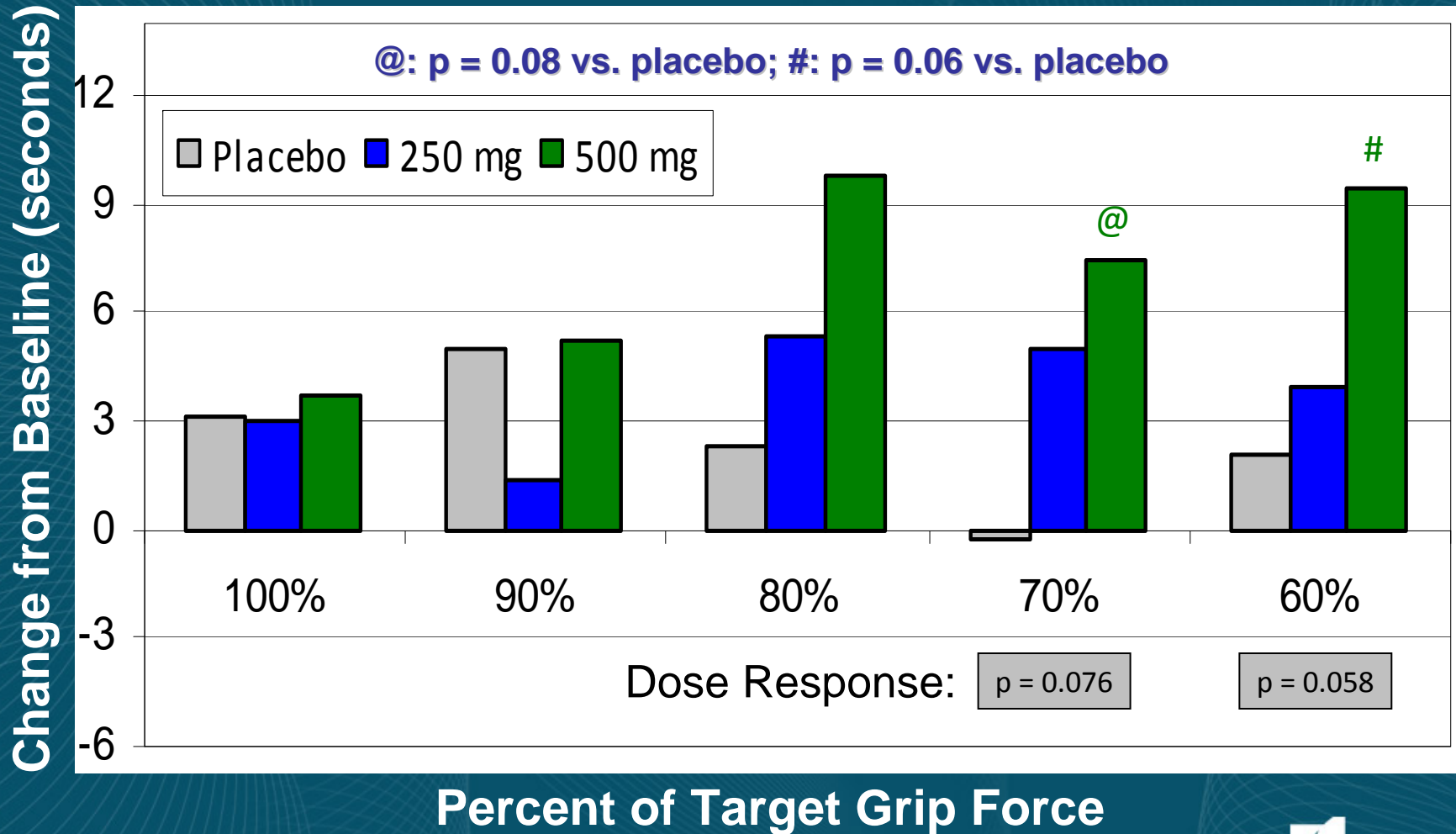
$p = 0.06$

$p = 0.004$

P-values reflect Better versus Same or Worse

# Sub-Maximal Handgrip Endurance Increases

Weaker hand at 6 hours



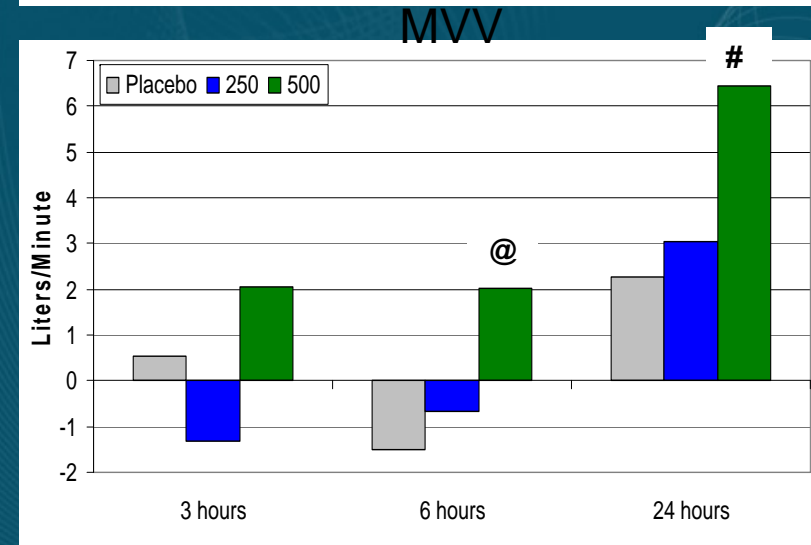
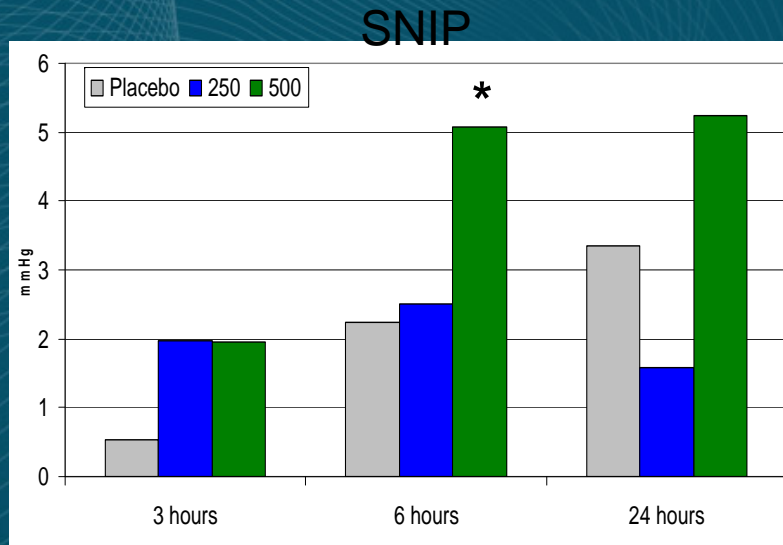
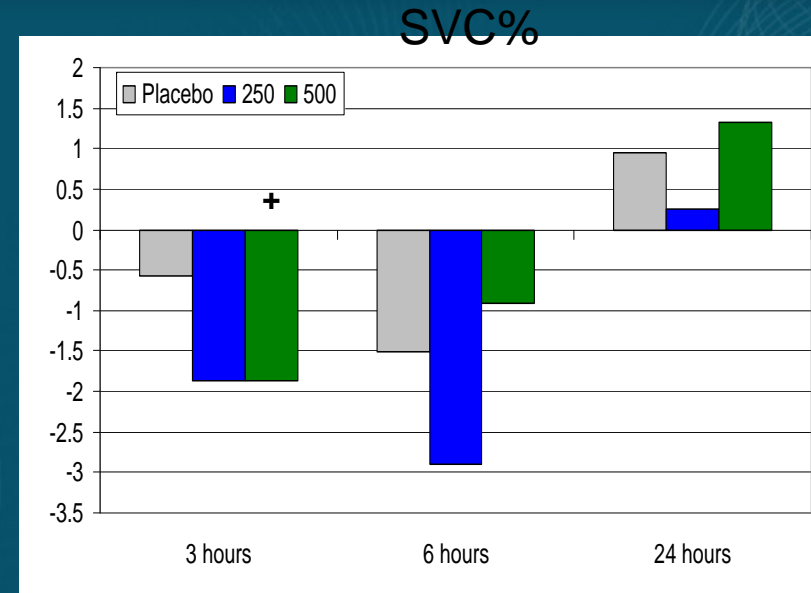
# Changes in Measures of Pulmonary Function

## Changes from Baseline vs. Placebo

SVC% = Slow Vital Capacity  
(% Predicted)

SNIP = Sniff Inspiratory Pressure  
(cm H<sub>2</sub>O)

MVV = Maximal Voluntary Ventilation  
(L/min)



\*: p = 0.1 vs. placebo; +: p = 0.09 vs. placebo; @: p = 0.05 vs. placebo; #: p = 0.02 vs. placebo

# CY 4024: Phase II Clinical Trial in ALS Patients

~ 24 Patients with Amyotrophic Lateral Sclerosis

Multi-center, randomized, double-blind, placebo controlled, 4 arm study

placebo

125mg  
CK-357

250mg  
CK-357

375mg  
CK-357

Each cohort receives 3 daily matching tablets for 14 days

Placebo Cohort

Low Dose Cohort

Medium Dose Cohort

High Dose Cohort

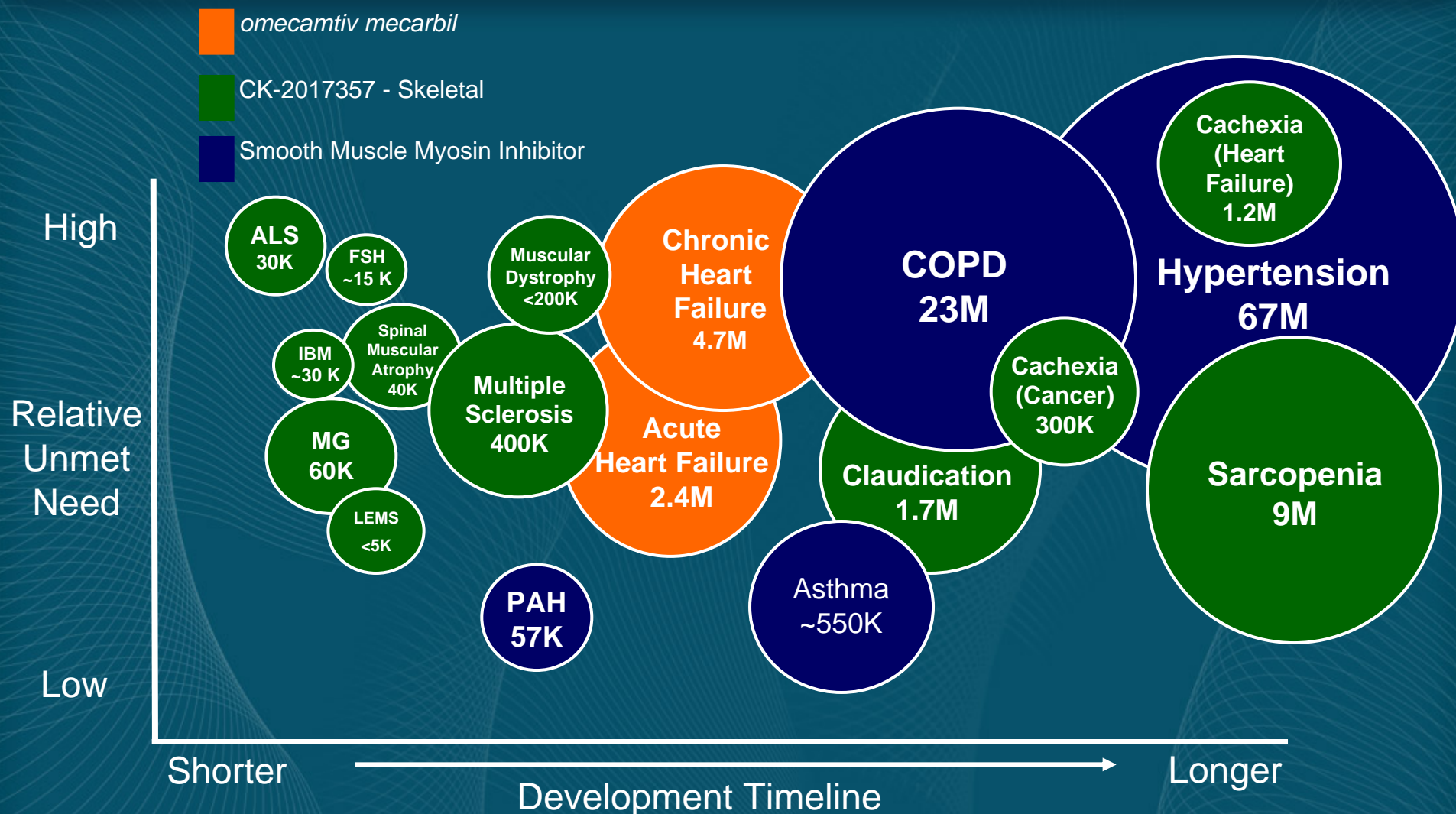
- **Primary Objective: Assess safety and tolerability of multiple oral doses to steady state**
- **Secondary Objectives: Calculate measurements of muscle function and patient assessments**
  - ALSFRS – R
  - Muscle fatigue
  - Pulmonary function
  - Patient and Investigator global assessments

# CORPORATE



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# Opportunities Across Multiple Timeframes \*



\* Cytokinetics' estimates based upon referenced sources. Citations available upon request

MG = Myasthenia Gravis  
LEMS = Lambert-Eaton Myasthenic Syndrome

IBM = Inclusive Body Myositis  
FSH = Facioscapulohumeral

# Q1 11 Financials: Condensed Balance Sheet Data

	<u>3/31/11</u> (in millions)
<b>Cash and cash equivalents</b>	<b>\$15.4</b>
<b>Short-term investments</b>	<b>44.5</b>
<b>Restricted investments</b>	<b>0.4</b>
<b>Total assets</b>	<b>65.7</b>
<b>Total Liabilities</b>	<b>6.0</b>
<b>Working capital</b>	<b>56.9</b>
<b>Accumulated deficit</b>	<b>(372.4)</b>
<b>Total stockholders' equity</b>	<b>59.6</b>
<b>Total shares outstanding</b>	<b>66.9</b>

In April 2011, the company completed a financing and received gross proceeds of approximately \$20.1 million before deducting estimated expenses.



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# Cytokinetics' R&D Milestones: 2011

## Cardiac Muscle

*Omecamtiv mecarbil – iv*

**1H 2011:** ✓  
Initiate Phase IIb  
Acute HF Trial

*Omecamtiv mecarbil – oral*

**2H 2011:**  
Initiate Phase I  
Study

## Skeletal Muscle

CK-2017357 – ALS

**1H 2011:** ✓  
Initiate Phase I  
DDI Study

**1H 2011:** ✓  
Initiate Phase II  
PK/PD Trial

CK-2017357 – Claudication

**2Q 2011:** ✓  
Data Phase IIa  
EoE Trial

CK-2017357 – Myasthenia Gravis

**1Q 2011:** ✓  
Initiate Phase IIa  
EoE Trial

**4Q 2011:**  
Data Phase IIa  
EoE Trial

✓ = completed



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