

Industry Needs for Drug Development in MD

**Cristina Csimma, RPh, MHP
Wyeth Research
Translational Research**

**4 August 2005
Bethesda**

Wyeth
Research

Current Status

Industry Perspective

- **No drugs developed or approved for MD**
- **Limited number of prospective, controlled trials**
 - ▶ Limited data reflecting clear conclusions about drugs currently used
 - ▶ Different methodology and endpoints used in different studies
 - ▶ Results difficult to interpret
- **Limited number of centers and sample size**
- **Limited health resource and QOL data**
- **Challenge: translate various approaches into uniform protocols**
- **Regulatory path for development of novel compounds to be determined**

Factors to facilitate drug development in MD

Expectations

Data

Support

Opportunities

Expectations

- **Realistic**

- ▶ Timing
 - Focus is on most efficient path to approval for most patients to benefit
- ▶ Process
 - Need to be methodical
 - Safety comes first

- **Informed**

- ▶ Role and value of pharmaceutical industry
- ▶ Regulatory needs
- ▶ Focus on entire clinical program not one study
- ▶ First study may not reflect greatest medical need

- **Resources are limited**

- ▶ Need clear cut data allowing interpretation of results
- ▶ Clear, prospective criteria for continued development

- **Many key audiences**

- ▶ Investigators, patients
- ▶ Regulatory agencies
- ▶ Reimbursement

Collaboration and flexibility

Expectations - Clinical trials

- **More large, multicenter trials**
- **More international trials**
- **More large cohort outcome studies-natural history data**
- **Greater focus on quantitative clinical and functional outcomes**
- **Centralized databases of molecular diagnoses**
- **Databases to reference functional impact (burden) of disease**
- **Cost-benefit analyses**

Factors to facilitate drug development in MD

Expectations

Data

Support

Opportunities

Data

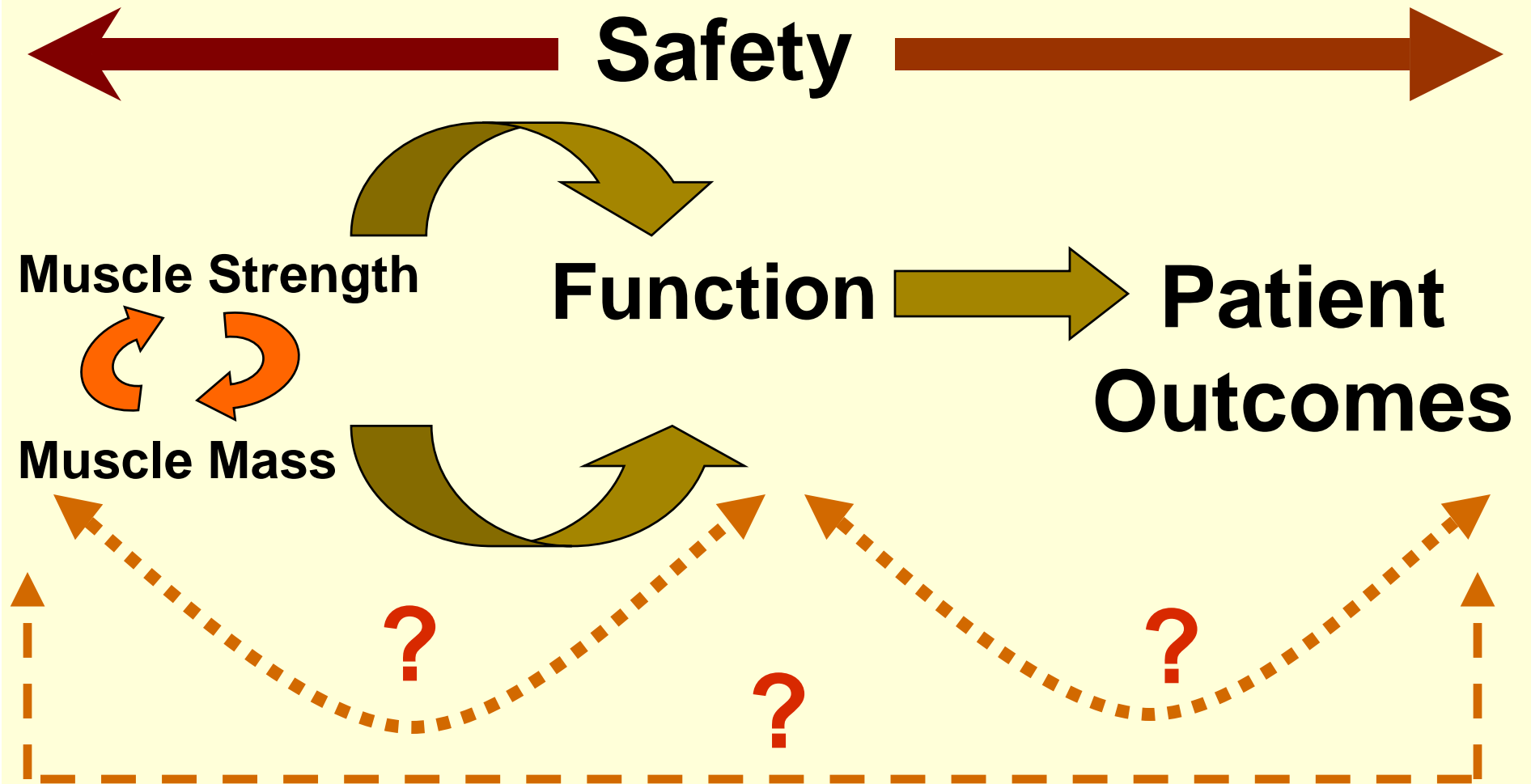
- **Natural history**
- **Outcomes assessments**
- **Databases**

Data

Natural History of Disease

- **Prospective, longitudinal data on rate of disease progression by MD type**
- **How to uniformly identify patients at a specific functional stage?**
 - ▶ Ability to generalize within and between types of MD
- **What is the minimum rate of change that is clinically meaningful?**
- **Using what measurements?**
 - ▶ Muscle strength: MMT, QMT?
 - ▶ Timed tests
 - ▶ Placebo effects?
- **What is the relationship between changes in various indices and meaningful clinical improvement/change?**

Data Outcomes Assessments



Data

Outcomes Assessments Methodology

- **Methodology challenges**
 - ▶ Objectivity
 - ▶ Standardization
 - ▶ Intra and inter-rater variability
 - ▶ Change over time
- **Need (functional?) indicator that:**
 - ▶ Is reliably measurable
 - ▶ Is common to multiple types of MD
 - ▶ Shows sufficient change over relatively short period of time
 - ▶ Logistically feasible on multicenter scale
- **Can we extrapolate methodology findings from DMD studies to adult dystrophies?**
- **Are biological activity endpoints applicable across types of MD?**

Data

Patient Health Outcomes

- Very important for drug development
- Agreement between experts variable regarding appropriateness and validation of various functional and QOL instruments
- Many “in progress”, very few published and available
- Limited data on burden of disease
- Goal to eventually link strength and function endpoints to patient perceived outcome of benefit
- Important for eventual access to drug; reimbursement

Databases

- **Molecular diagnosis of disease**
- **Burden of disease, co-morbidity profile**
- **Clinical network with clear avenues to facilitate efficiency of planning and conduct of clinical studies**
 - ▶ Ability to identify incidence and prevalence of MD types
 - ▶ Ability to identify potential number of patients by disease stage, functional and co-morbidity profile

Factors to facilitate drug development in MD

Expectations

Data

Support

Opportunities

Support

- **Access to data: publication of available data**
- **Much is happening that is not yet in public domain**
- **Access to experts**
- **Access to meetings, awareness?**
- **Relationship between research goals of various academic networks, MDA, other advocate groups**
 - ▶ Clarity
 - ▶ Synergy

Factors to facilitate drug development in MD

Expectations

Data

Support

Opportunities

Opportunities

- **Lack of precedent**
 - ▶ Challenge that presents great opportunity
- **Unique opportunities for partnership**
 - ▶ Tightly knit research community
- **Investigator motivation**
- **MDA and others highly supportive**
- **MD community receptive**
- **Regulatory agencies open to active dialogue to evaluate most appropriate development path**
- **Opportunity to shape future direction**

How Can Pharmaceutical Research Complement Academic Research? Value Added

- **Scale**
 - ▶ Sample size
 - ▶ Statistical significance
- **External Validity**
 - ▶ Global approach versus single/few centers
 - ▶ Integration of evaluation instruments
 - ▶ Standardization of evaluation tools
- **Translate research into the regulatory process to facilitate product development**
- **Resources and infrastructure dedicated to clinical trial**
 - ▶ On site
 - ▶ Ongoing external monitoring
 - ▶ Uniformity of data collection and interpretation
- **Facilitate more integration of research goals to support drug development**

*Potential for partnership that advances
the field as well as the product*

Thank you!

Wyeth
Research