**BACKGROUND**

- Selective fast skeletal muscle activators are hypothesized to improve function in individuals with neuromuscular disorders.
- Tirasemtiv, a potent, selective, fast skeletal muscle tropinin activator, is currently in phase 3 clinical trial for ALS.
- CK-2127107, also known as CK-107, is a next generation fast skeletal muscle tropinin activator that may improve muscle function and physical performance in people with SMA.
- CK-2127107 has been the subject of five completed Phase 1 clinical trials in healthy volunteers, which evaluated safety, tolerability, bioavailability, pharmacokinetics, and pharmacodynamics.
- Cytokinetics started a Phase 2 clinical trial of CK-107 in patients with SMA in Q4 2015.

**PRECLINICAL DATA**

- **Skinning Fast Skeletal Muscle Fiber**
  
  CK-107, a selective fast skeletal muscle tropinin activator, slows the rate of calcium release from tropinin C, sensitizing the sarcomere to calcium and increasing fast skeletal muscle contractility.

**RESULTS**

- Well characterized safety, tolerability, PK/PD during oral administration.

**CONCLUSIONS**

- In preclinical models, CK-107 increased muscle contractility.
- Phase 1 studies characterized its tolerability and pharmacodynamic effect on muscle.
- Cytokinetics is conducting a Phase 2 clinical trial of CK-107 in patients with SMA.

**DISCLOSURES**

S Rudnicki, J Andrews, F Malik, A Woff, J Day has served as a consultant to Cytokinetics.