

Microsymposium

MS70.O06

Cryo-EM structure of the actin/myosin/tropomyosin complex

S. Raunser¹

¹*Freie Universität Berlin, Institute of Chemistry and Biochemistry, Berlin, Germany*

Our cryo-EM structure of the actin-tropomyosin-myosin complex provides novel insights into the interaction between actin, myosin and tropomyosin. The pseudo-atomic model of the complex obtained from fitting crystal structures into the map defines the large actin-myosin-tropomyosin interface and the molecular interactions between the proteins in detail. It indicates that the N-terminus of actin is involved in this interaction. Our data suggest that tropomyosin is stabilized by electrostatic interactions with myosin and likely slides rather than rolls on F-actin when moving from the blocked to the myosin-bound state [1].

[1] *Behrmann E et al., Cell, 2012, 150: 327-339*

Keywords: helical reconstruction, actin, myosin