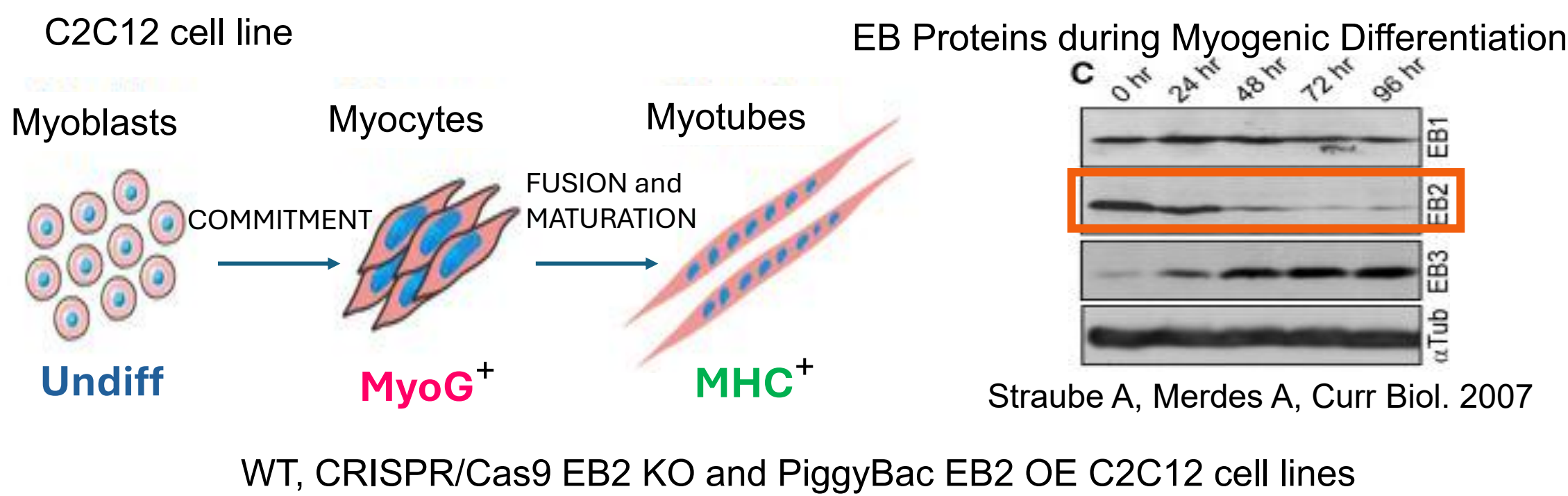


BACKGROUND

- EB1 and EB3 are core +TIP proteins that promote persistent microtubule growth and recruit numerous regulators to growing microtubule ends.
- In contrast, EB2 remains comparatively poorly understood.
- EB2 is developmentally regulated and is downregulated during differentiation-associated cytoskeletal remodeling.

HOW DOES EB2 CONTRIBUTE TO CYTOSKELETAL REMODELING DURING DIFFERENTIATION?

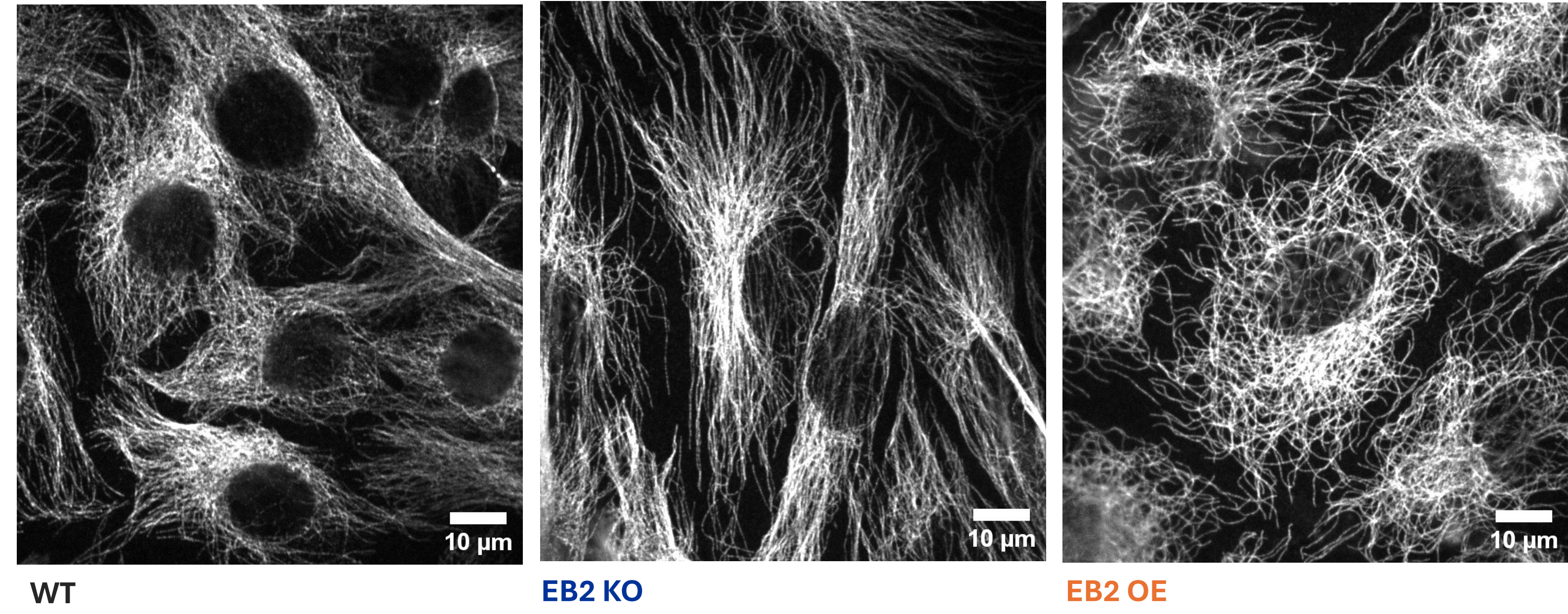
EXPERIMENTAL SYSTEM



RESULTS

EB2 CONTROLS MICROTUBULE NETWORK GEOMETRY

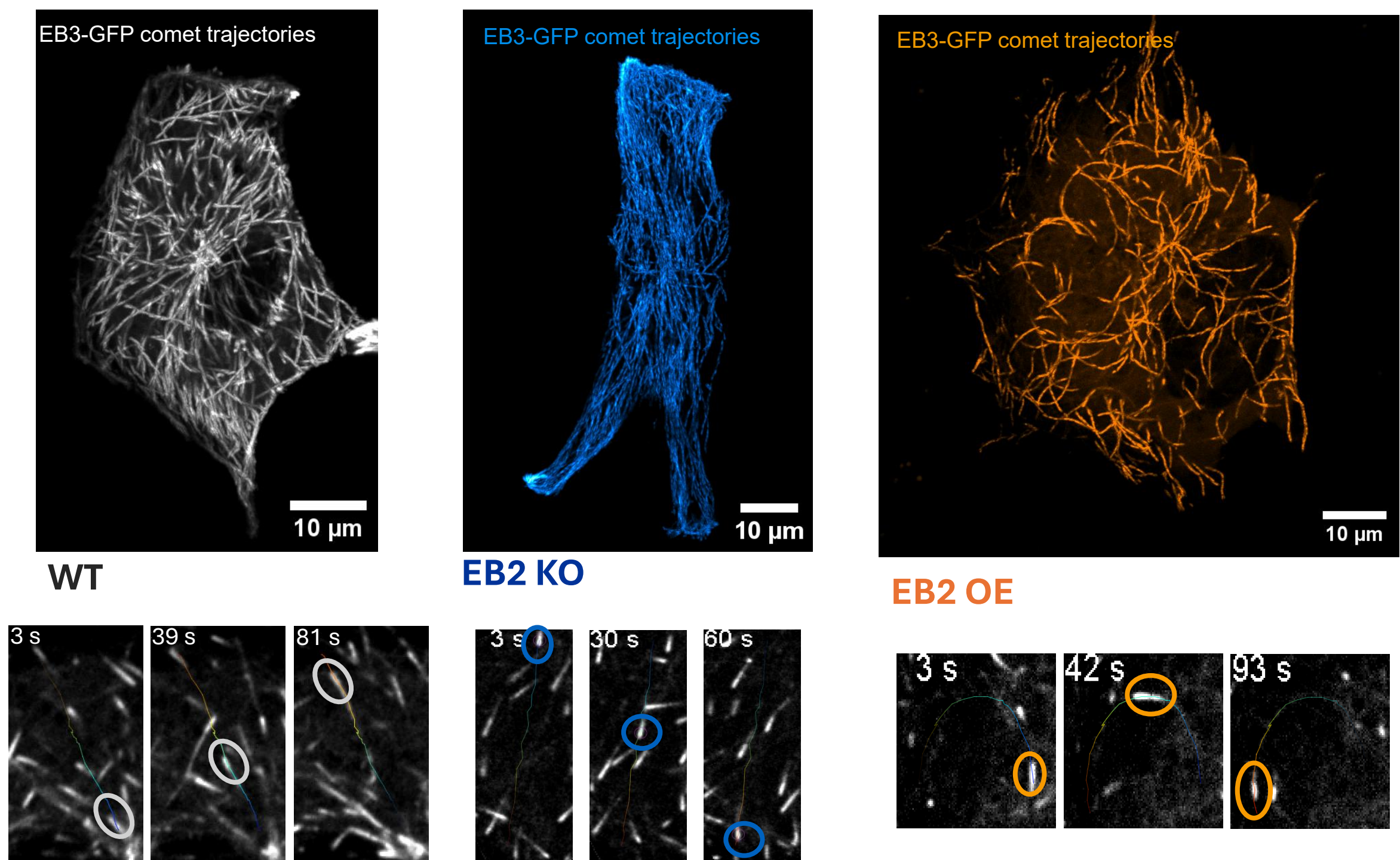
C2C12 cells undifferentiated fixed and stained for α-tubulin



EB2 overexpression generates curved, disorganized MT networks, whereas EB2 depletion promotes parallel MT bundle formation.

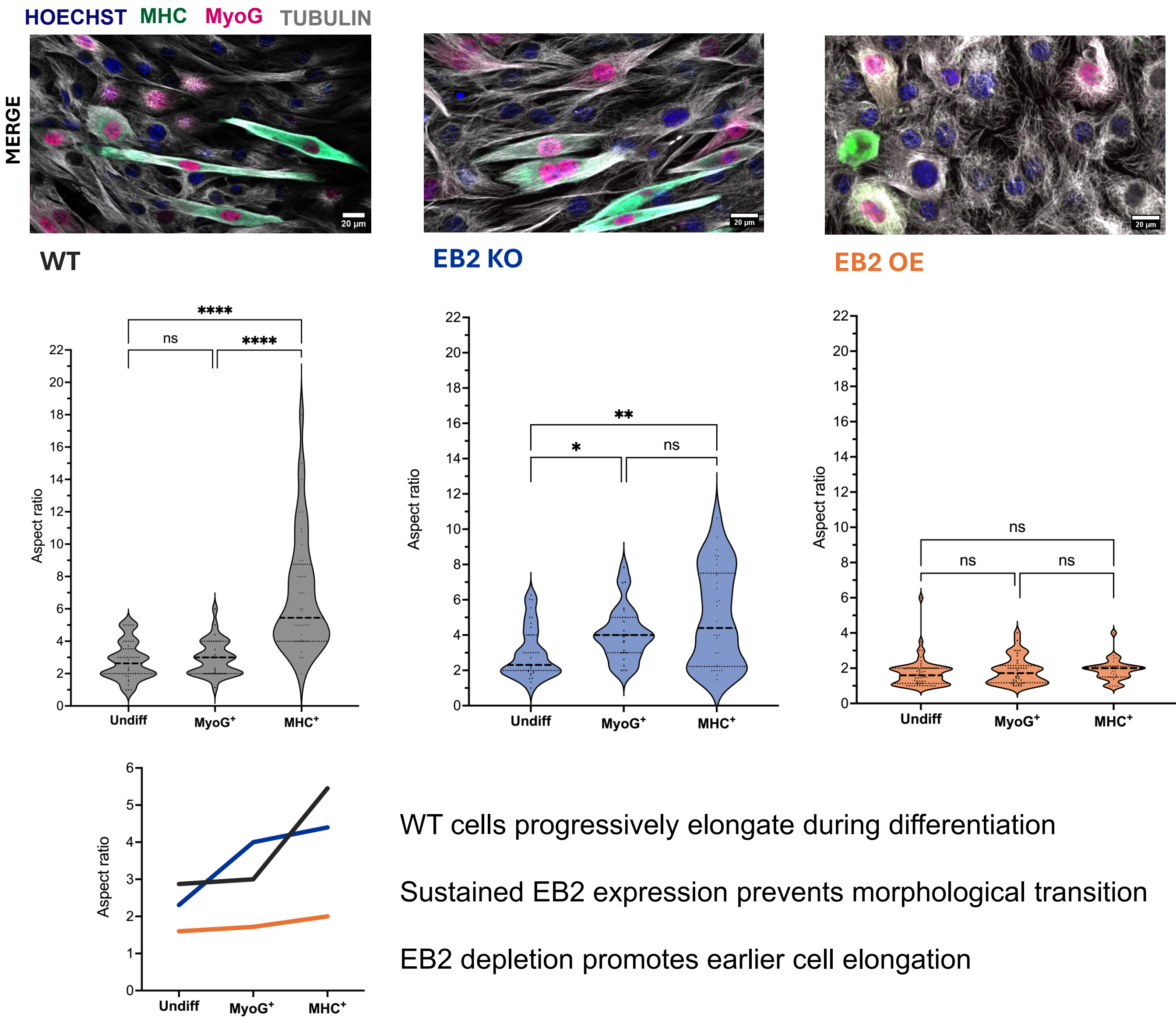
EB2 MODULATES MICROTUBULE GROWTH PERSISTENCE AND DYNAMICS

EB3-GFP live imaging and semi-automated comet tracking in C2C12 undifferentiated



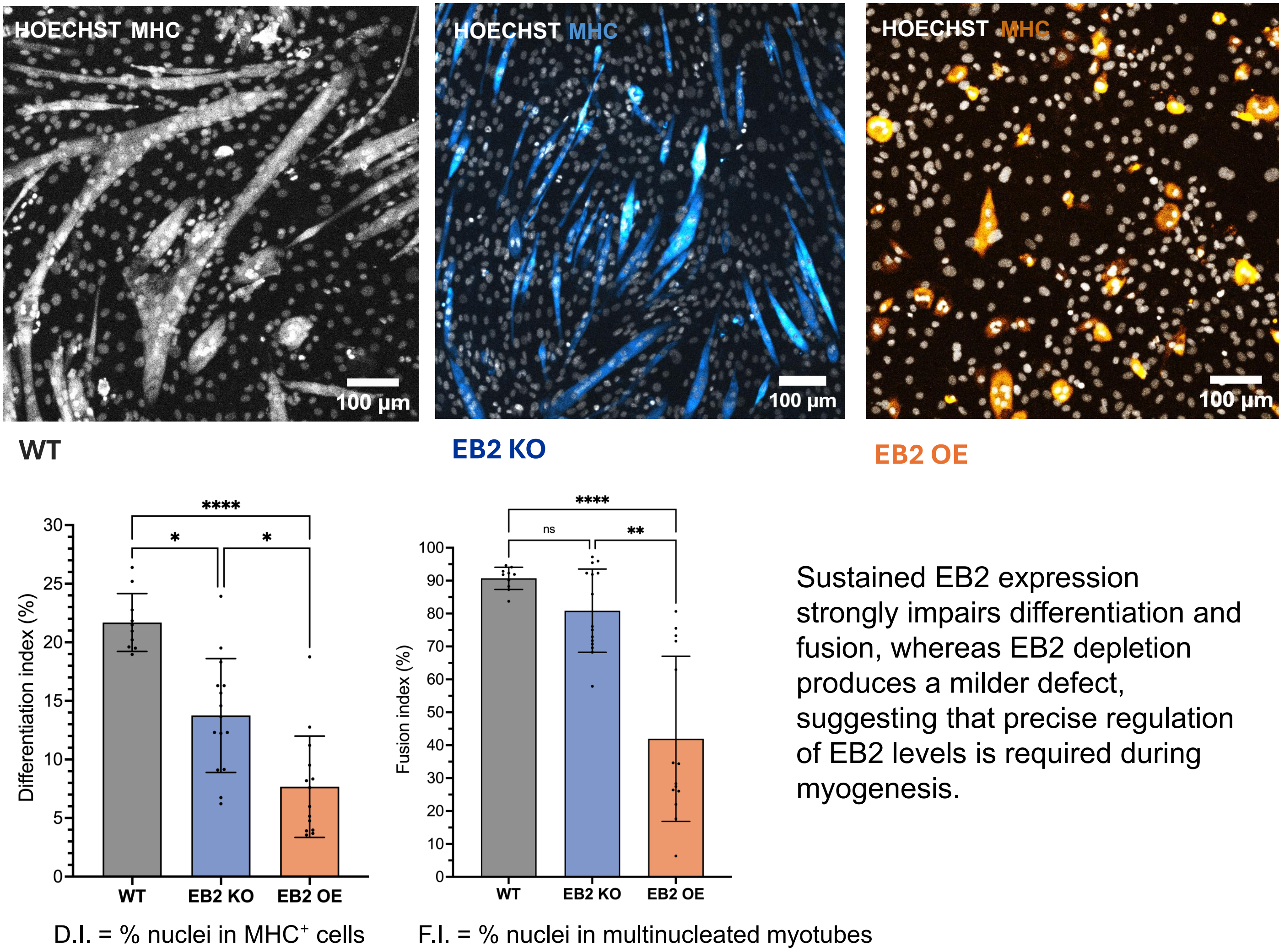
EB2 REGULATES DIFFERENTIATION-ASSOCIATED CELL ELONGATION

C2C12 cells differentiated 2 days fixed and stained for differentiation markers

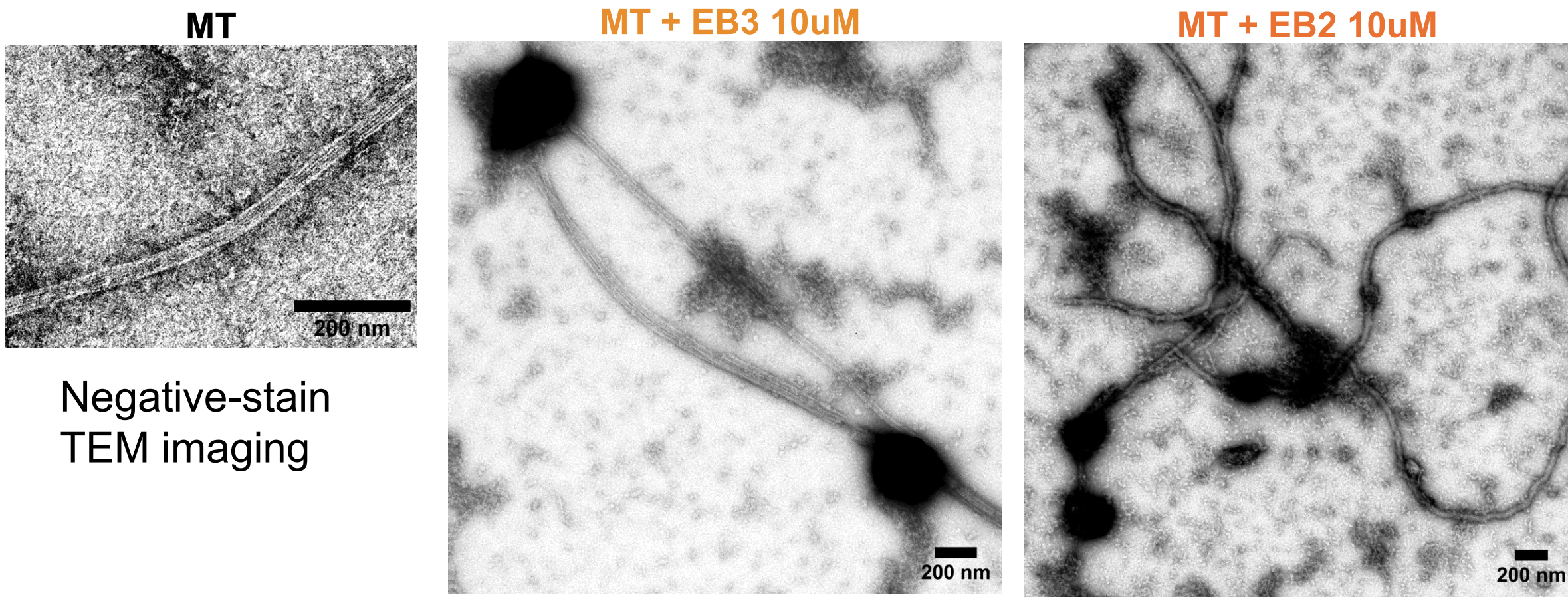


SUSTAINED EB2 EXPRESSION IMPAIRS MYOTUBE FORMATION

C2C12 cells differentiated 7 days fixed and stained for myotube marker MHC



EXPLORING THE BASIS OF EB2 DEPENDENT MT REMODELING



EB2 extensively decorates microtubules and forms large protein accumulations

GRAPHICAL SUMMARY

