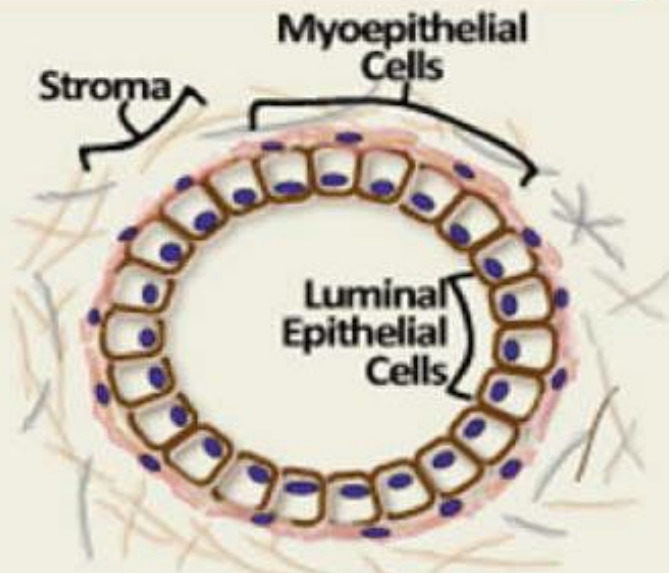




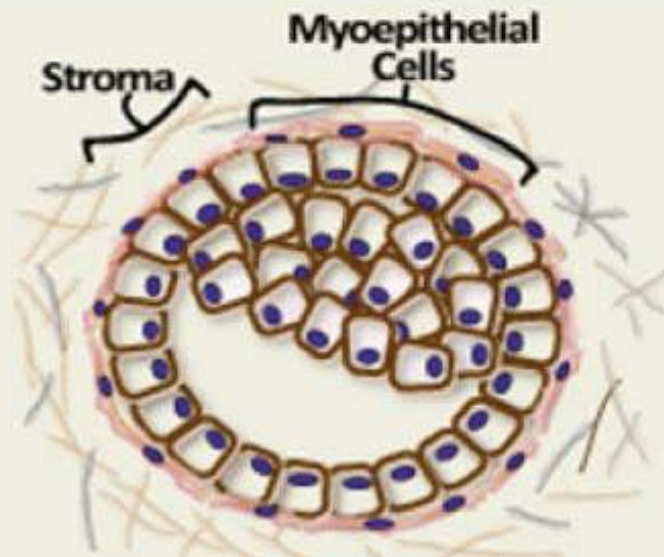
POSITIVE REGULATION OF YAP NUCLEAR ACTIVITY VIA AMOT EXPRESSION

Julianna A. Sherman
Oral Roberts University

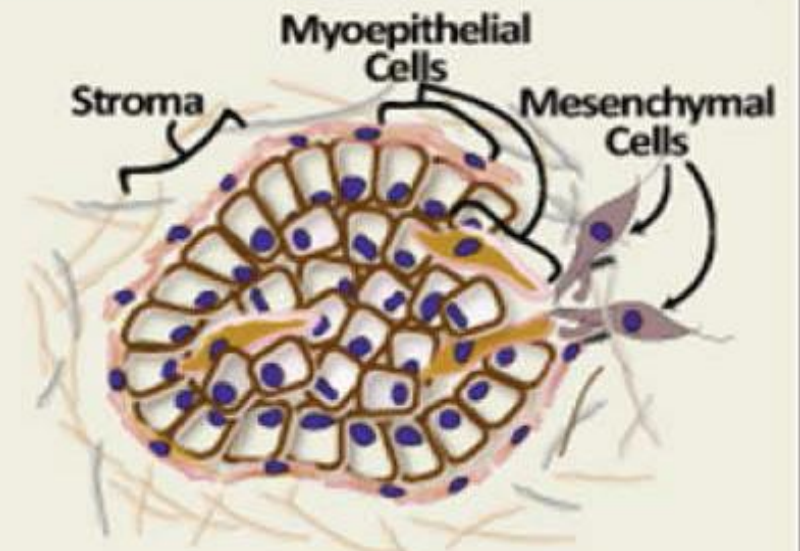
BREAST CANCER PROGRESSION



Normal Mammary Duct

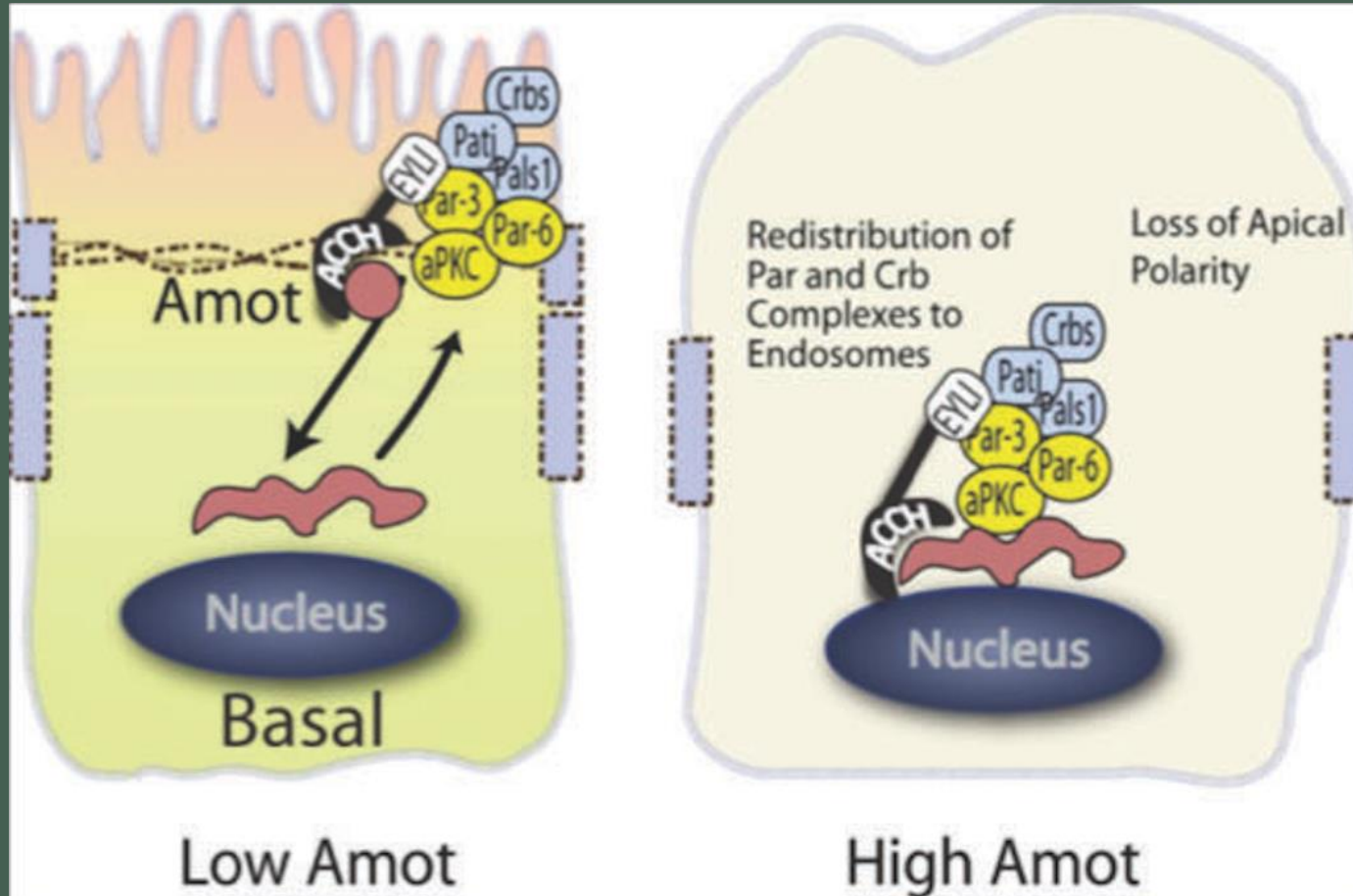


Ductal Carcinoma In Situ (DCIS)



Invasive Ductal Carcinoma

REGULATION OF EPITHELIAL APICAL POLARITY

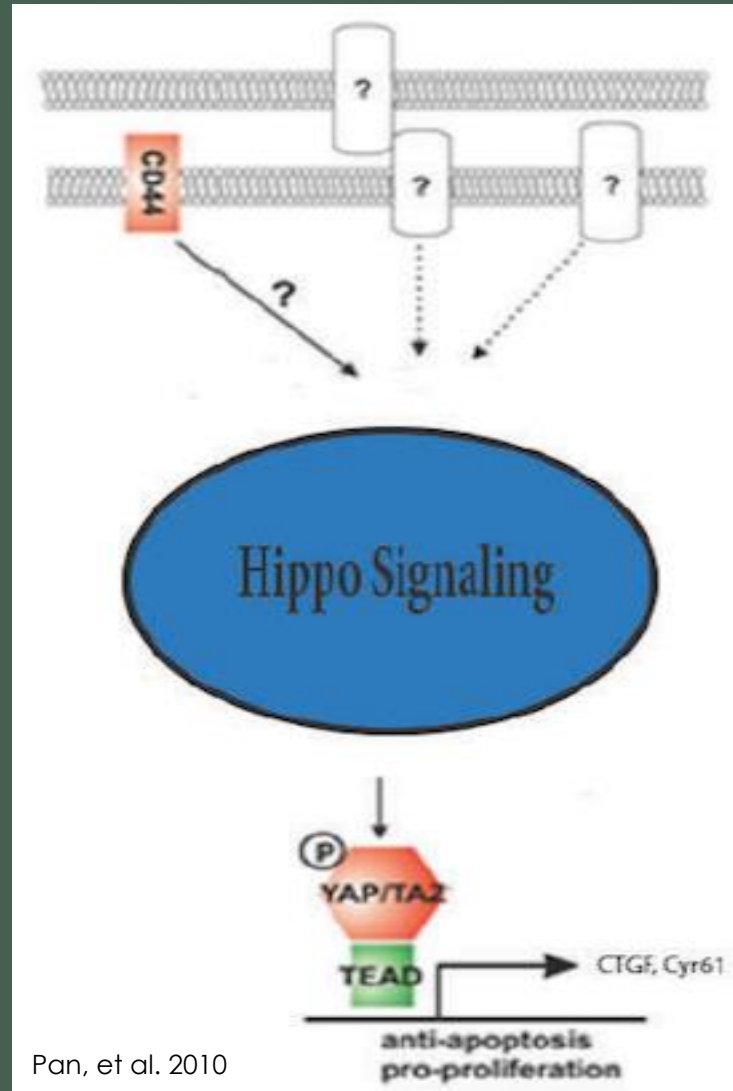


ANGIOMOTIN (Amot)

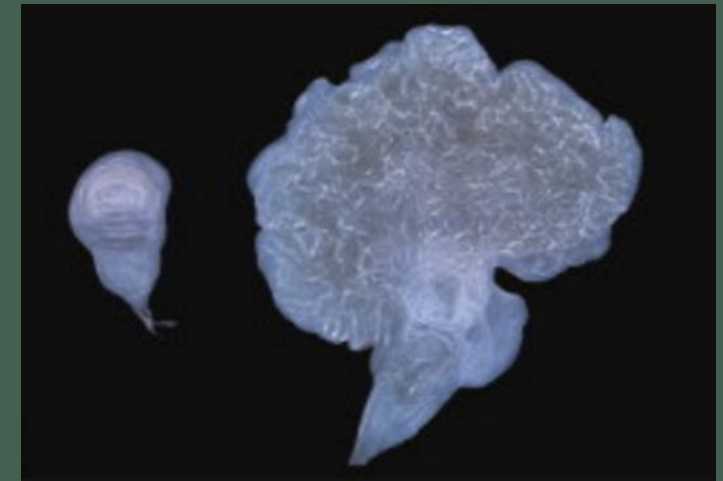
- Apical polarity adaptor protein
- Regulator of growth/ de-differentiation
- Amot expression correlates with breast cancer stage
- Amot expression upregulated by inflammation
- Amot appears to be regulating epithelial growth

YAP

A UNIVERSAL
REGULATOR OF
ORGAN
SIZE



Pan, et al. 2010



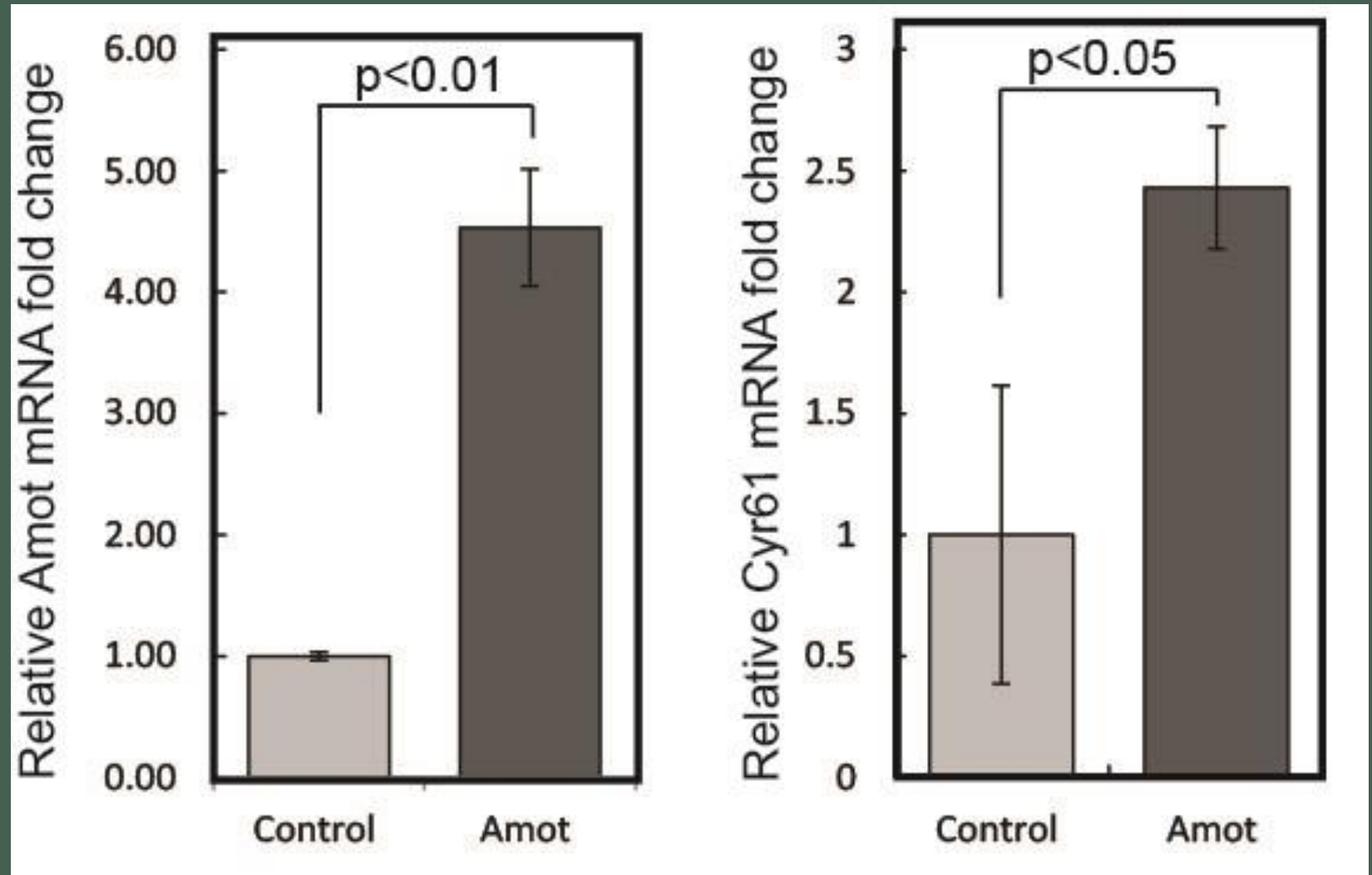
HYPOTHESIS

- Given Amot's role in promoting growth in epithelia the authors hypothesize that this effect is due at least in part to increasing nuclear Yap activity.

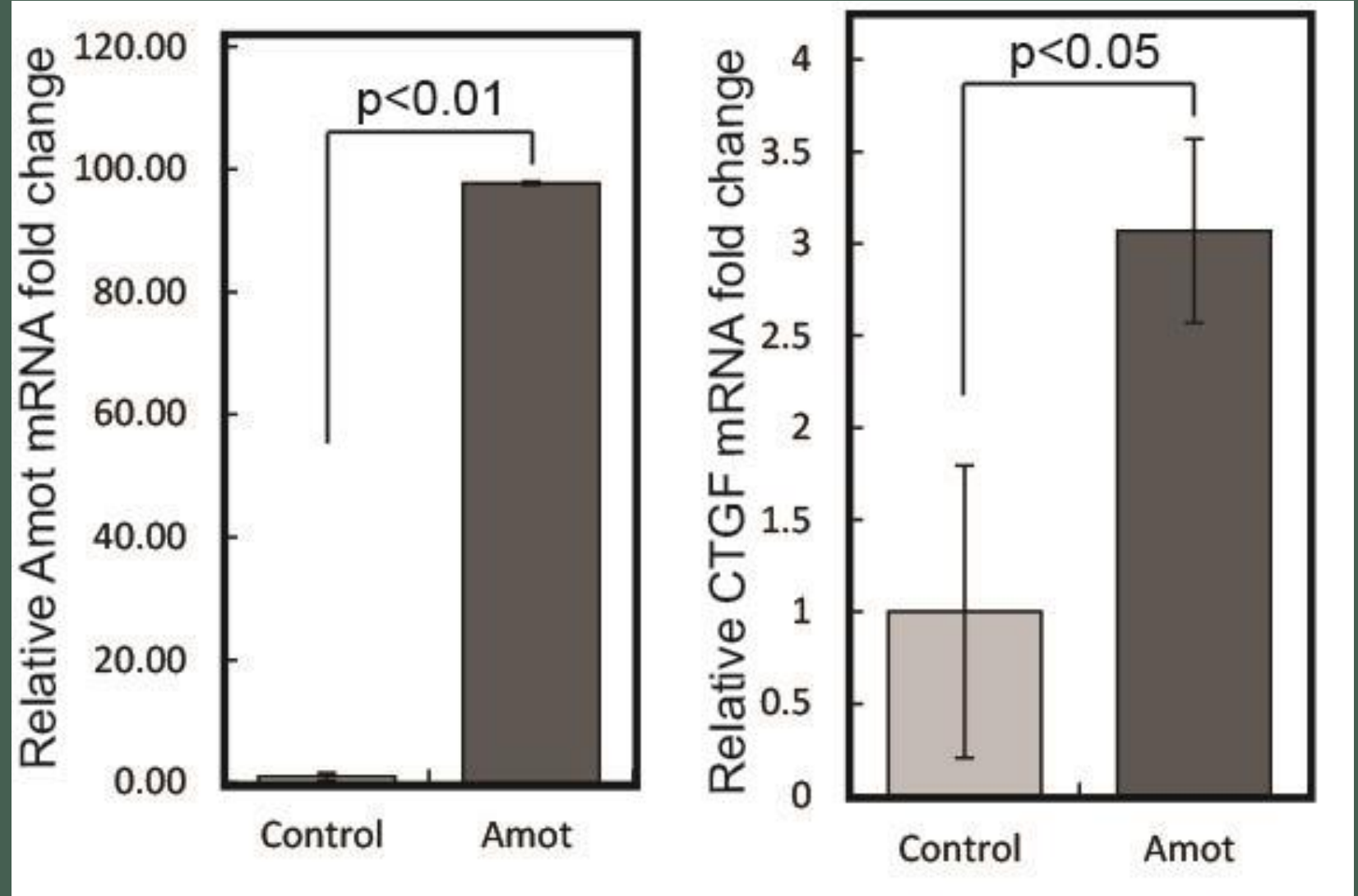
MATERIALS AND METHODS

- Mammalian Tissue Culture (MCF10A & HEK293T cells)
- Stable Gene Expression
- Matrigel 3D Organogenesis Modeling
- Phenol Chloroform RNA Extraction and Purification
- cDNA Synthesis
- Quantitative Real-Time PCR

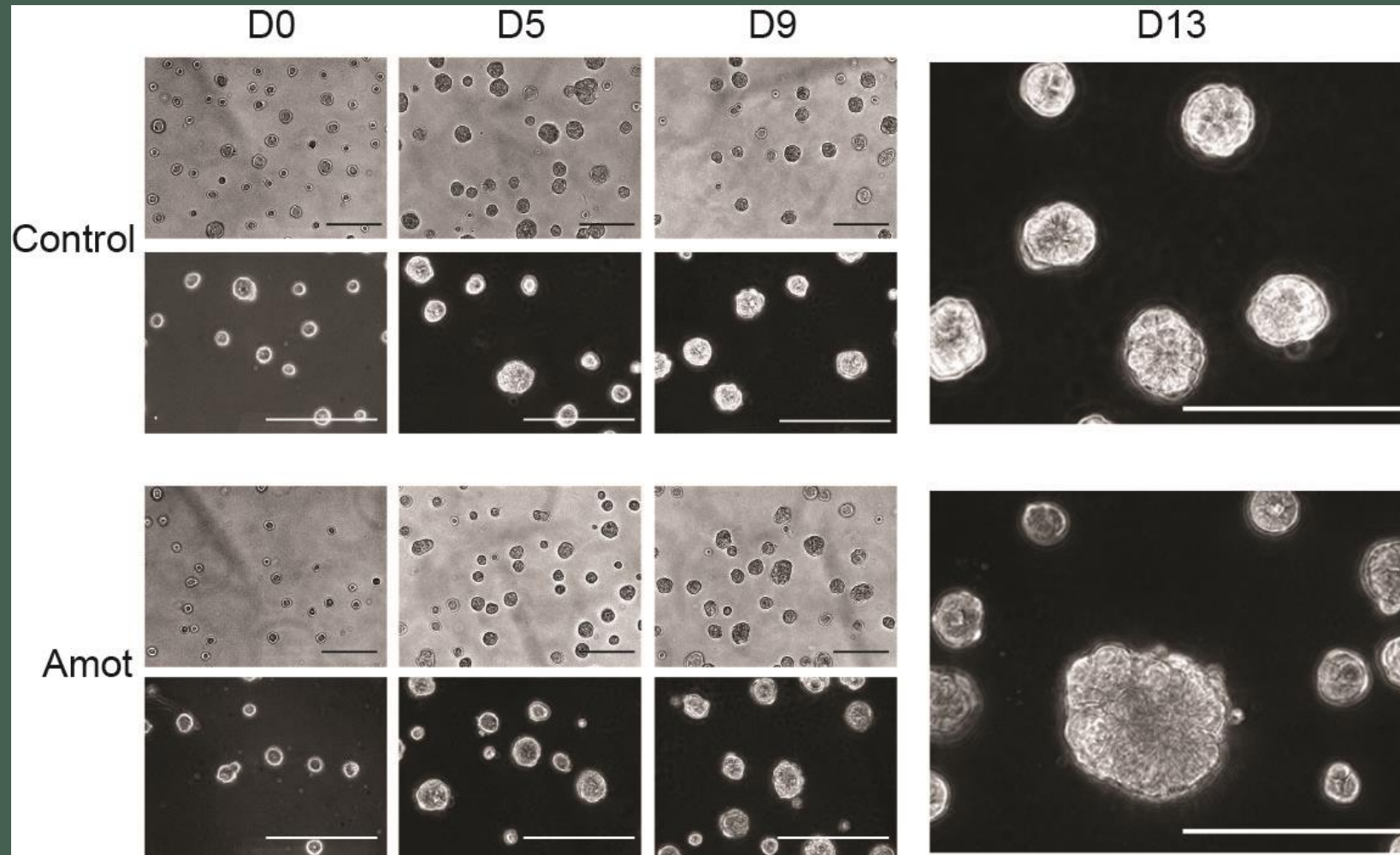
Cyr61



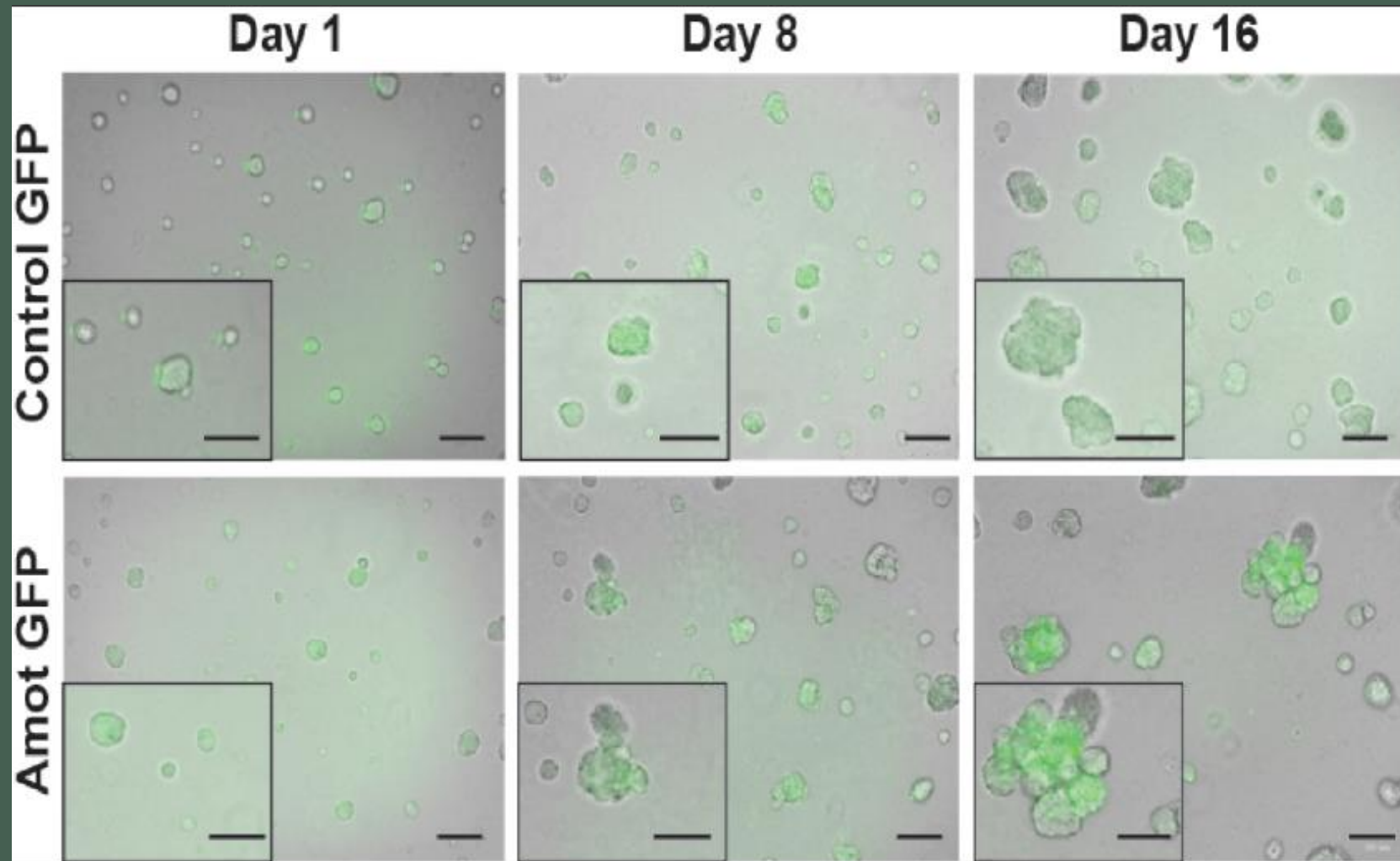
CTGF



ACINI FORMATION



ACINI FORMATION



CONCLUSION

- Amot expression positively correlates with nuclear Yap activity
- Consistent with these observations Amot expression results in mammary acini organ overgrowth.

FUTURE RESEARCH PLANS

- Causative role for Amot in promoting nuclear Yap activity?
- Will Yap have nuclear activity following Amot silencing?
- Is Amot required for nuclear Yap activity?

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Oral Roberts University

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QUESTIONS?