



QUANTITATIVE AND SYSTEMS BIOLOGY COLLOQUIUM: A matter of time: temporal regulation of gastrulation morphogenesis

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About The Speaker:

Margot earned her Bachelors degree from Muskingum College in Ohio and her Ph.D. in Cell and Developmental Biology from the University of Virginia. She completed her postdoctoral research training in the Developmental Biology Department at Washington University School of Medicine in St. Louis, where she was awarded an NIH K99/R00 Pathway to Independence fellowship. In November 2019, Margot joined the faculty of Baylor College of Medicine in Houston, TX, as an Assistant Professor in the Center for Precision Environmental Health and Molecular and Cellular Biology Department. At all stages of her career, Margot has enjoyed teaching, mentoring, and volunteering with students of all ages to encourage their passion for scientific inquiry. She continues to train the next generation of scientists within her lab, where she studies early embryonic development in the vertebrate zebrafish model.

Abstract:

Shaping of the vertebrate body plan requires that embryonic cell behaviors be coordinated not only in space, but also in time. But how embryos both generate and respond to temporal cues remains poorly understood. Using zebrafish gastrulation as a model of morphogenetic cell behaviors, we have found that temporal dynamics of morphogen signaling determine tissue-specific morphogenetic outcomes. In a second study, we found that a wave of new transcription is required to kick start gastrulation morphogenesis, and identified specific genes whose levels determine the timing of morphogenesis onset. Together these findings highlight the important role of temporal regulation in shaping the embryo.

Date:

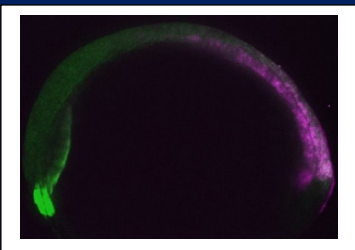
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Time:

12:30- 1:45 PM

Location:

GRAN 135



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