**POSTER 24: A mechanosensitive vascular niche for Drosophila hematopoiesis**

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Hematopoietic stem and progenitor cells maintain blood cell homeostasis by integrating various cues provided by specialized microenvironments or niches. Biomechanical forces are emerging as key regulators of hematopoiesis. Here we report that mechanical stimuli provided by blood flow in the vascular niche control *Drosophila* hematopoiesis. In vascular niche cells, the mechanosensitive channel Piezo transduces mechanical forces through intracellular calcium upregulation, leading to Notch activation and repression of FGF ligand transcription, known to regulate hematopoietic progenitor maintenance. Our results provide insight into how the vascular niche integrates mechanical stimuli to regulate hematopoiesis.