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**Research Interests**

**Spatial biology** – Bone biology

- Cell lineage & skeletal stem cells
- Bone development & bone cancers

**Strengths or Unique Resources**

Mouse genetics – in vivo lineage-tracing approaches  
 Frozen sections, Microscopy & Imaging

**Type of collaborator you seek**

Spatial transcriptomics/genomics  
 Access to the platform, Computational collaborators

**Publication List (link & qr code)**

JCI Insight (2024), Nat Commun (2023, 2022, 2020)  
 Nature (2018), etc.

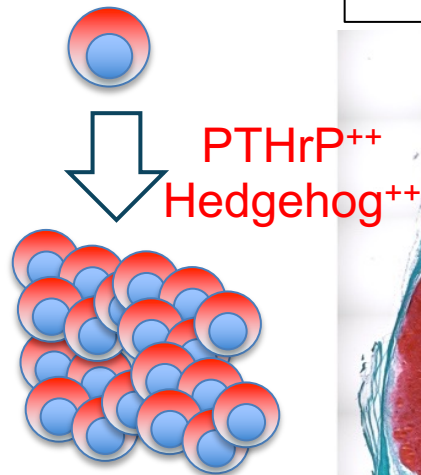
**Lab or Faculty website (link & qr code)**

UTHealth Ono & Ono Laboratory

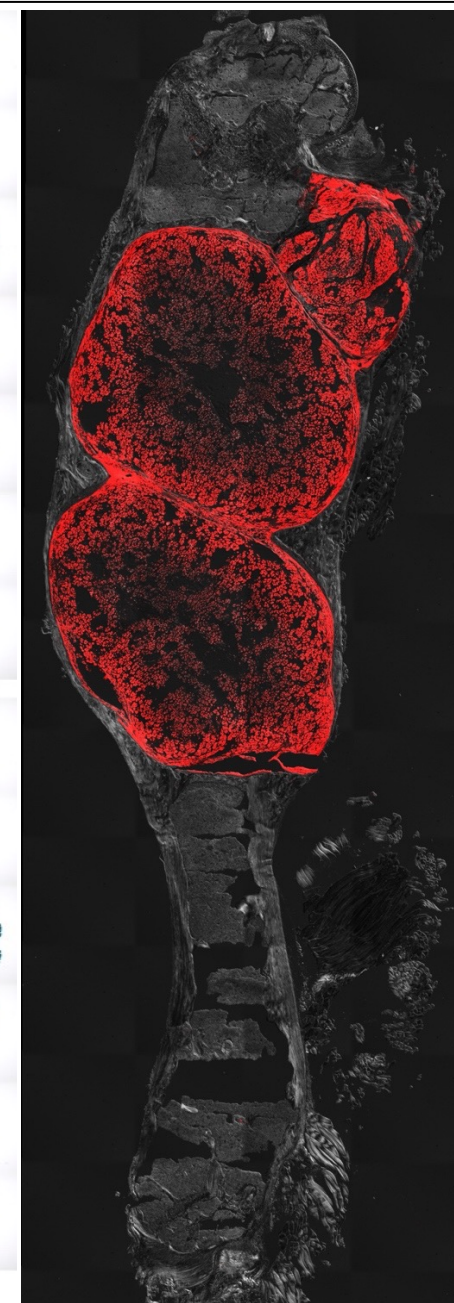
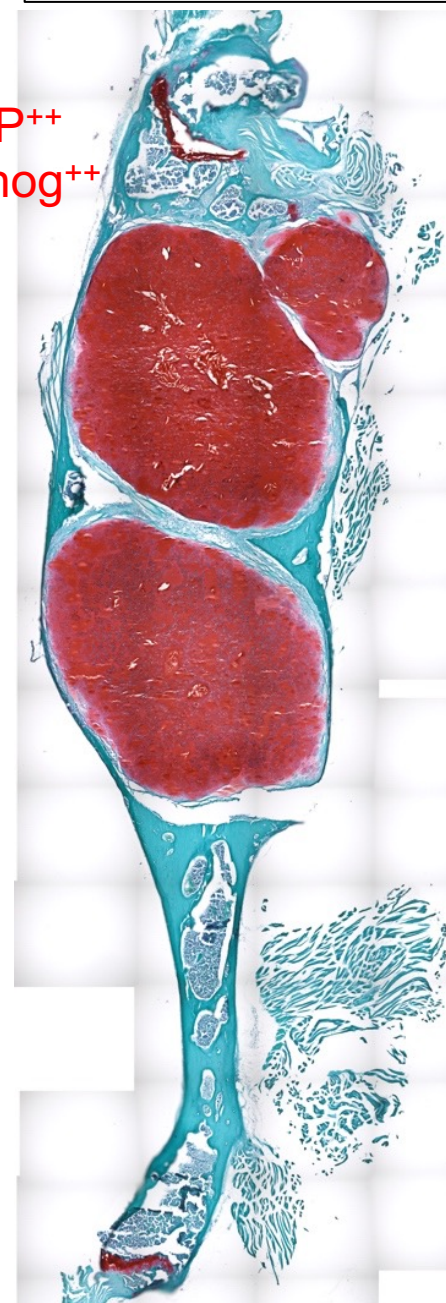
**LinkedIn (link & qr code)**

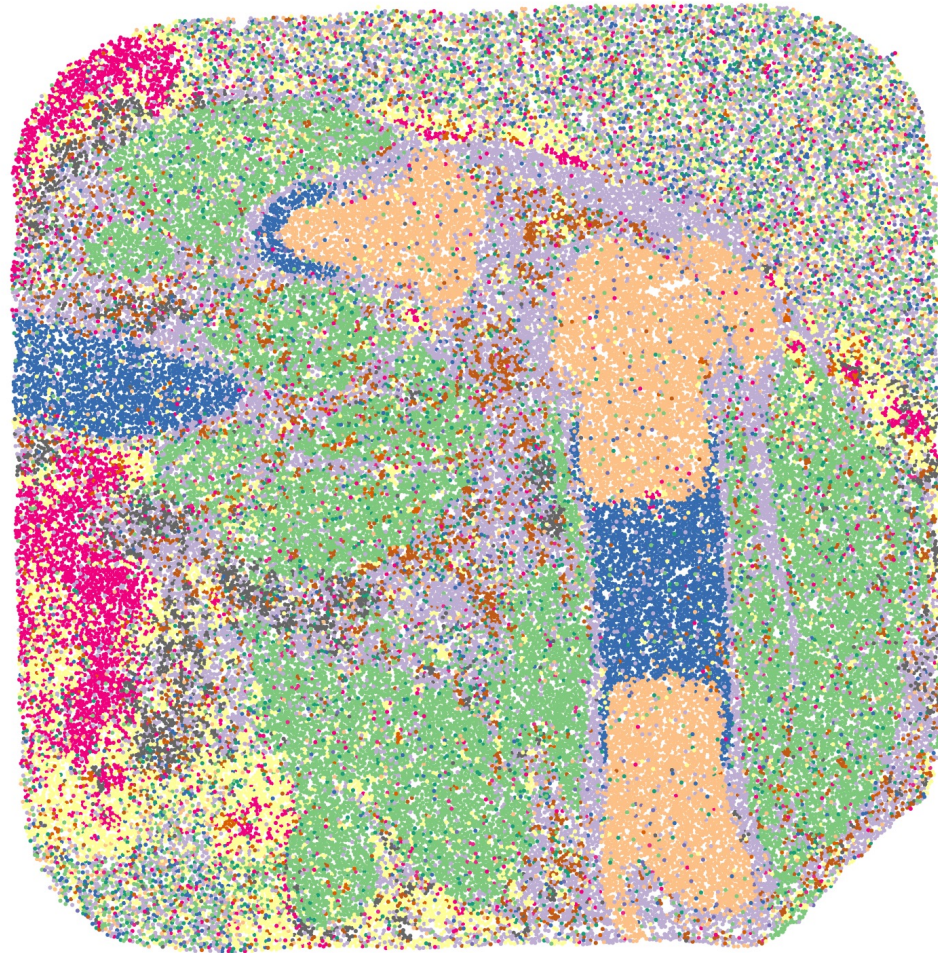
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Stem cells

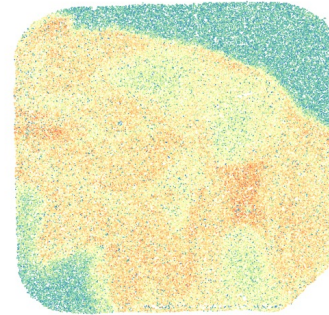


Mouse model of chondrosarcoma

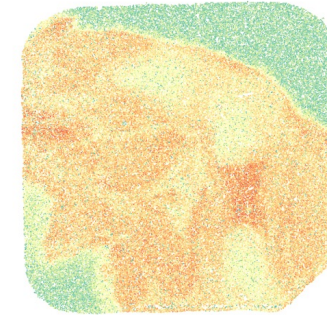




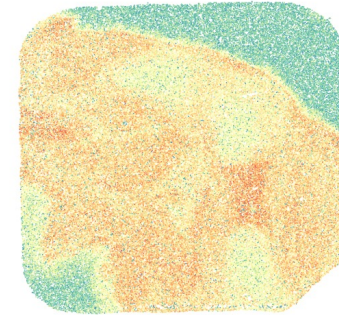
log<sub>10</sub> (Number of UMI)



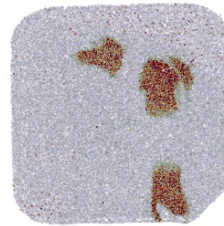
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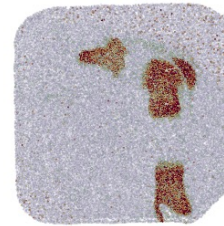
log<sub>10</sub> (Number of reads)



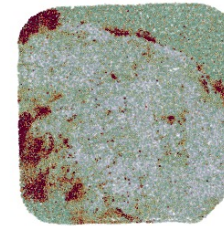
*Col9a3* 0.0 0.5 1.0 1.5 2.0



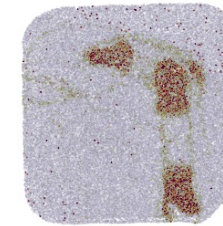
*Col2a1* 0.0 0.5 1.0 1.5 2.0



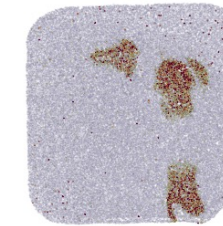
*Hbb-bs* 0 1 2 3



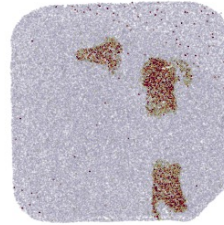
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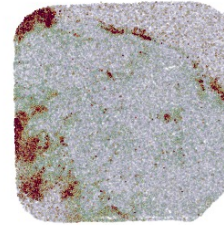
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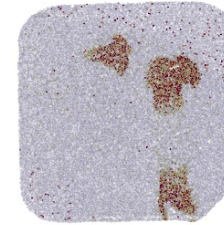
*Matn1* 0.0 0.5 1.0 1.5



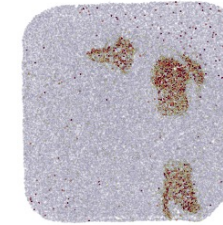
*Hbb-bt* 0 1 2



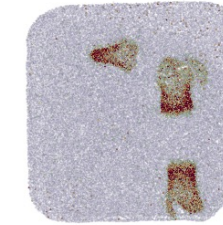
*Wwp2* 0.0 0.5 1.0 1.5



*Col9a2* 0.0 0.5 1.0 1.5



*Comp* 0.0 0.5 1.0 1.5 2.0



→ To be integrated with droplet-based scRNA-seq (PIPseq)

## Resources to offer:

Set-up and know-how for...

- Mouse genetics & In vivo lineage-tracing  
54 mouse lines for studying embryonic, fetal, growing & adult bones
- Frozen sectioning  
Leica CM1860 cryostat (2X)
- High-quality imaging  
Zeiss Axio Observer Z1 automated microscope  
(with ApoTome)

## Resources we are looking for:

- Single-cell spatial transcriptomics – Access to hardware  
*Discovery:* 10X Visium HD – Visium CytAssist  
*Confirmation:* 10X Xenium etc.
- Computational analysis of single-cell spatial datasets:  
“*Cell-cell interaction in somatic mosaicism*”
  - Interactions between tumor cells and their surrounding non-mutant cells
  - Oncogene-induced alterations of intercellular signaling

