

07/23/24

**TIME SENSITIVE: MERFISH Opportunity!**

**TO:** GRT Hub user community

**RE:** Opportunity to benefit from our MERFISH demonstration project

The Genomics Research and Technology Hub in collaboration with the Baram lab will be hosting a **Demo Vizgen MERFISH instrument in the Baram laboratory** in order to evaluate user interest and instrument performance. The Baram lab will provide support for this demo.

**During this trial period of about 3 months, users will use the MERFISH v1 instrument for spatial transcriptomics on their tissue of interest**, allowing users to assess this technology.

MERFISH allows high-resolution detection of 140 to 500 genes, with (a) detection of low abundance genes and (b) technology minimizing both false positive and negative errors. Additional strengths include subcellular resolution and a large field. Specifically, the demo unit, MERSCOPE v1, enables up to ten ROIs totaling 1 cm<sup>2</sup>. The planned purchase / replacement MERSCOPE Ultra, has an ROI = 3 cm.<sup>2</sup> Frozen and fixed tissues can be analyzed

**Madison (Madi) Tetzlaff** (mTetzlaff@hs.uci.edu) a highly knowledgeable and experienced MD/PhD student in the Baram lab, has generously offered to guide users. Madi will be happy to contribute to experimental planning to maximize the MERFISH use, discuss reagents, timelines and execution. In addition, the Baram lab (with its cryostat) will be happy to guide users in sample sectioning and preparation.

**Important points:**

- a. **Vizgen offers a 50% discount on all reagents during our demo.**
- b. Mouse brain and other tissue **probe kits** are available in 4 weeks; custom kits may require up to 6 weeks- so reach out to Madi ASAP.

A positive experience with the instrument will lead to its purchase and the upgrade to the Ultra that is currently being rolled out

To maximize the time and the batch-processing of your tissues, **please reach out to Madi ASAP.** She will work with you and coordinate across groups to optimize efficiency and minimize cost.

**Attached please find: 1)** Vizgen description of the MERFISH v1 and Ultra instruments. **2)** Vizgen user guide; **3)** experiment planning spreadsheet (courtesy of M Tetzlaff); and **4)** Vizgen price list.