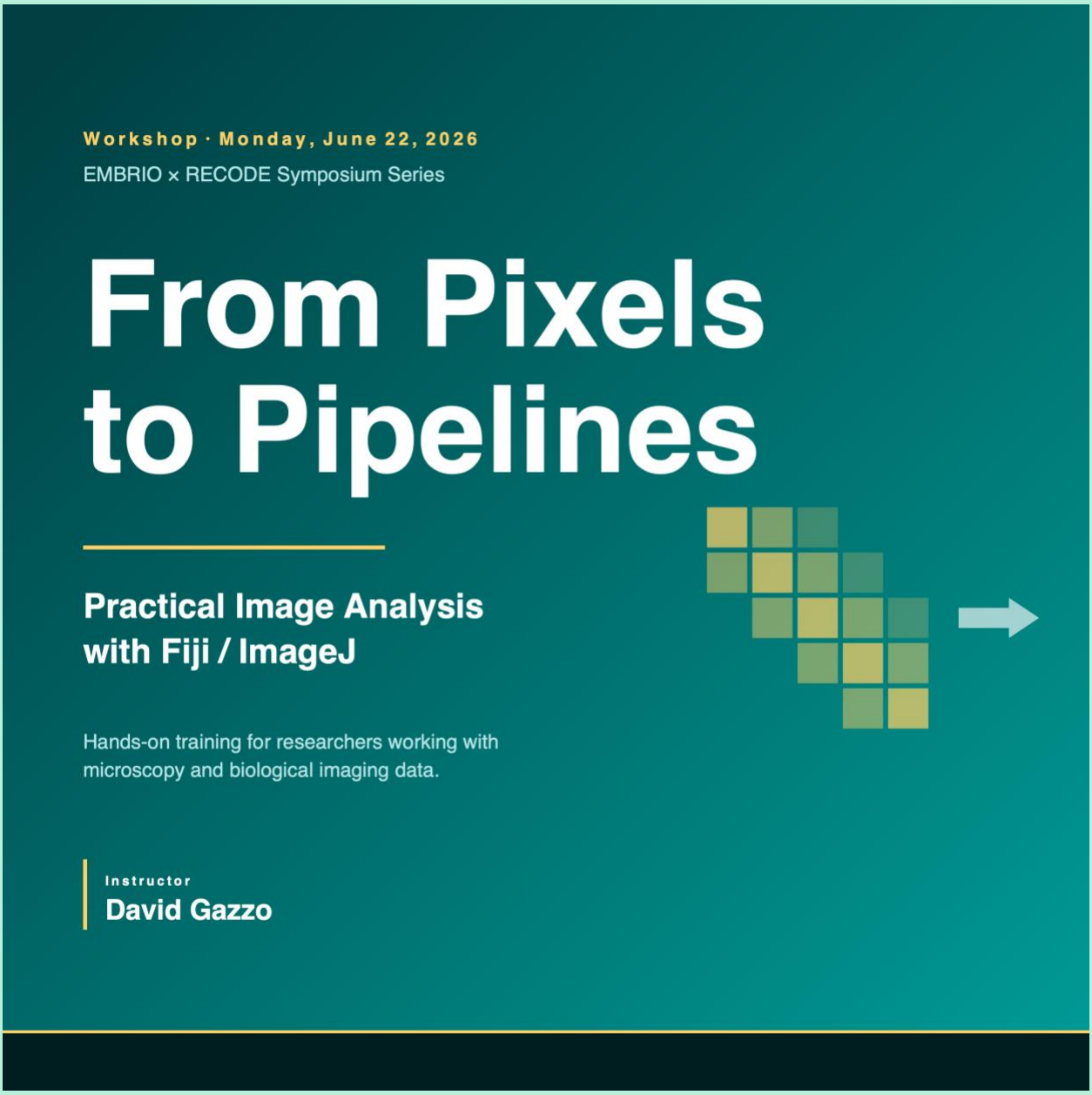

Mini-Workshop: From Pixels to Pipelines: Practical Image Analysis with Fiji/ImageJ, Monday June 22nd (1-5pm).

Lead instructor: David Gazzo, Ph.D. Candidate, Zartman Lab, Notre Dame.

Workshop Description
This hands-on workshop introduces participants to practical image analysis using Fiji / ImageJ, moving from fundamental imaging concepts to reproducible analysis pipelines.

We will cover:

- **Microscopy fundamentals**

    - How cameras convert photons into pixels
    - Why image processing choices depend on acquisition settings
- **Core Fiji workflows**
    - Image import, stacks, projections, and reslicing
    - Brightness/contrast interpretation (and common pitfalls)
    - Overlays, ROIs, and intensity measurements
    - Basic visualization and data extraction tools
- **Reproducible analysis pipelines**
    - Using plugins (Updater + manual installation)
    - Building macros for automated analysis
    - Exporting structured outputs for downstream analysis (including Python workflows)
- **Hands-on component**
    - Participants are encouraged to bring their own datasets
    - Guided exercises + optional pipeline-building session tailored to real data

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Key Outcomes
By the end of the workshop, participants will be able to:

- Confidently navigate Fiji for image analysis tasks
- Understand how image acquisition affects downstream quantification
- Perform ROI-based and intensity-based measurements
- Create basic automated macros for repeatable workflows
- Export data suitable for further analysis in Python or other tools
- Begin building reproducible image analysis pipelines

Suggested Prerequisites (recommended)
Besides having Fiji installed (https://imagej.net/software/fiji/), I'd suggest:

- **Basic familiarity with microscopy images**
    - Knowing what channels, z-stacks, and time-lapse data are
- **Comfort with basic file handling**
    - Opening/saving files, navigating folders
- **No coding experience required**
    - But familiarity with basic logic (steps, loops conceptually) is helpful for macros
- **Optional but helpful**
    - Experience with fluorescence microscopy data (confocal or widefield)
    - Having at least one dataset you are interested in analyzing