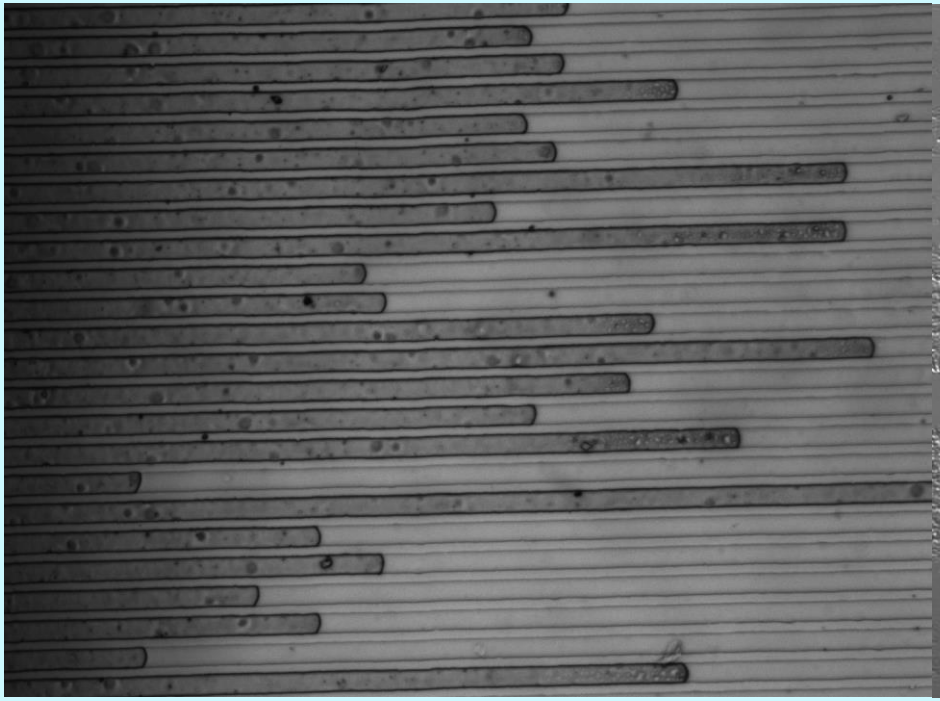
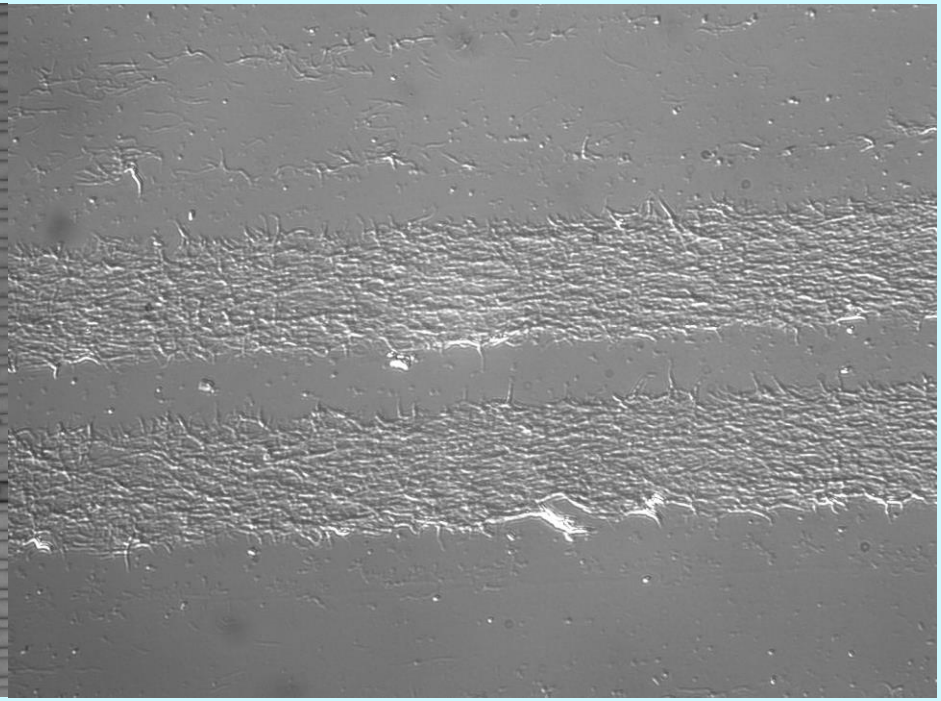
Joey's Status Update

Weekly Worm Meeting

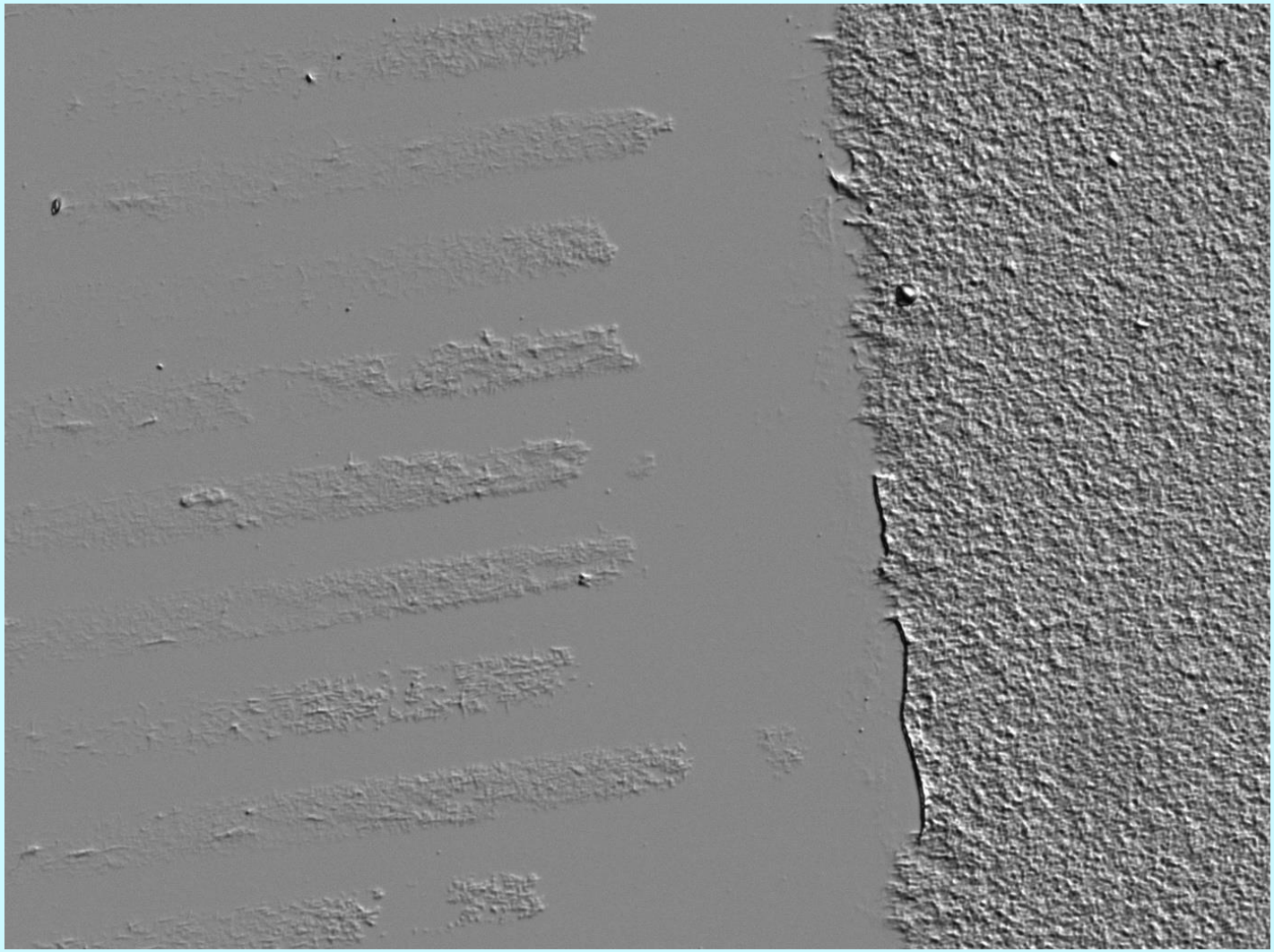
November 11th, 2006

Collagen Patterning

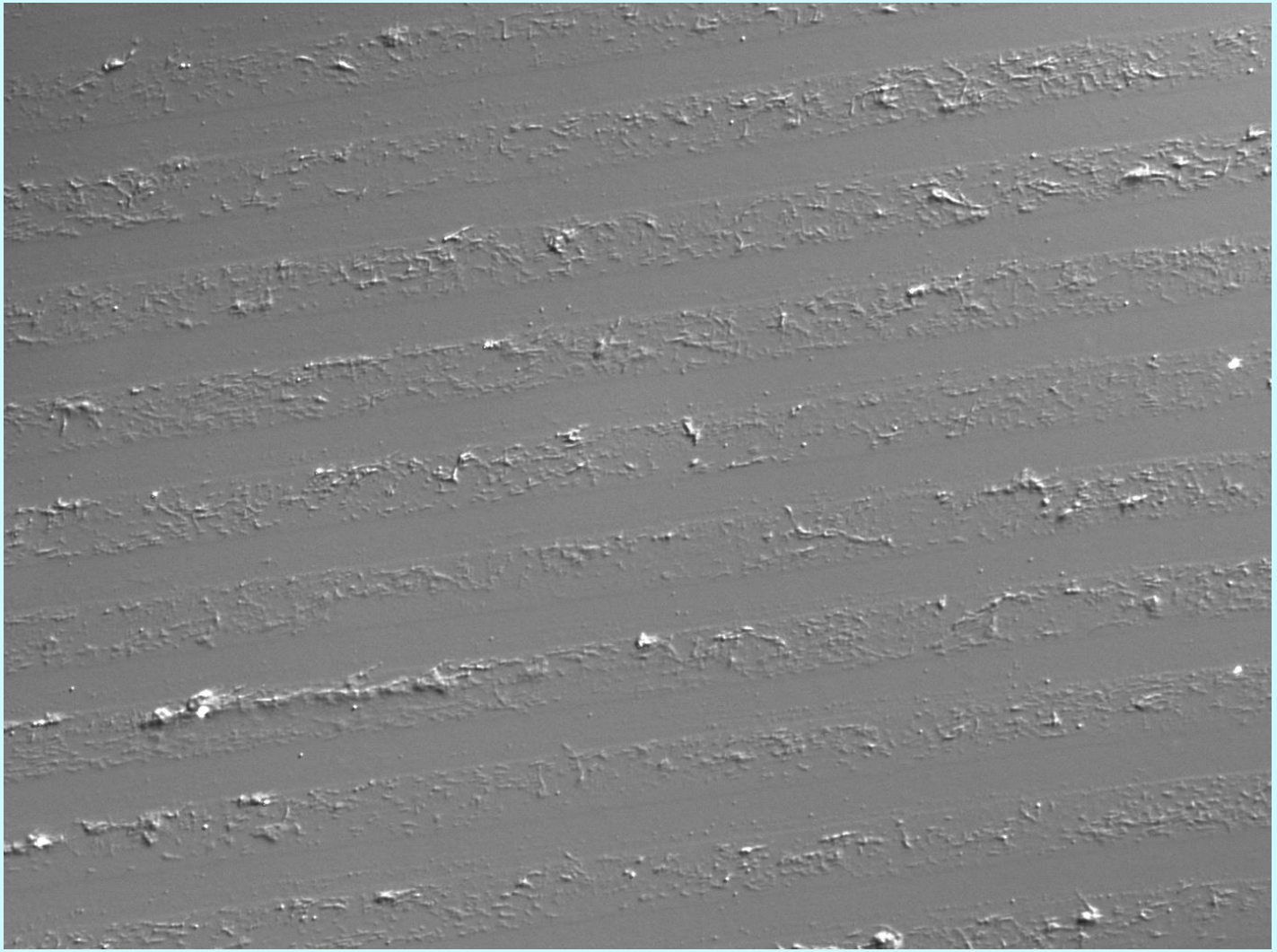




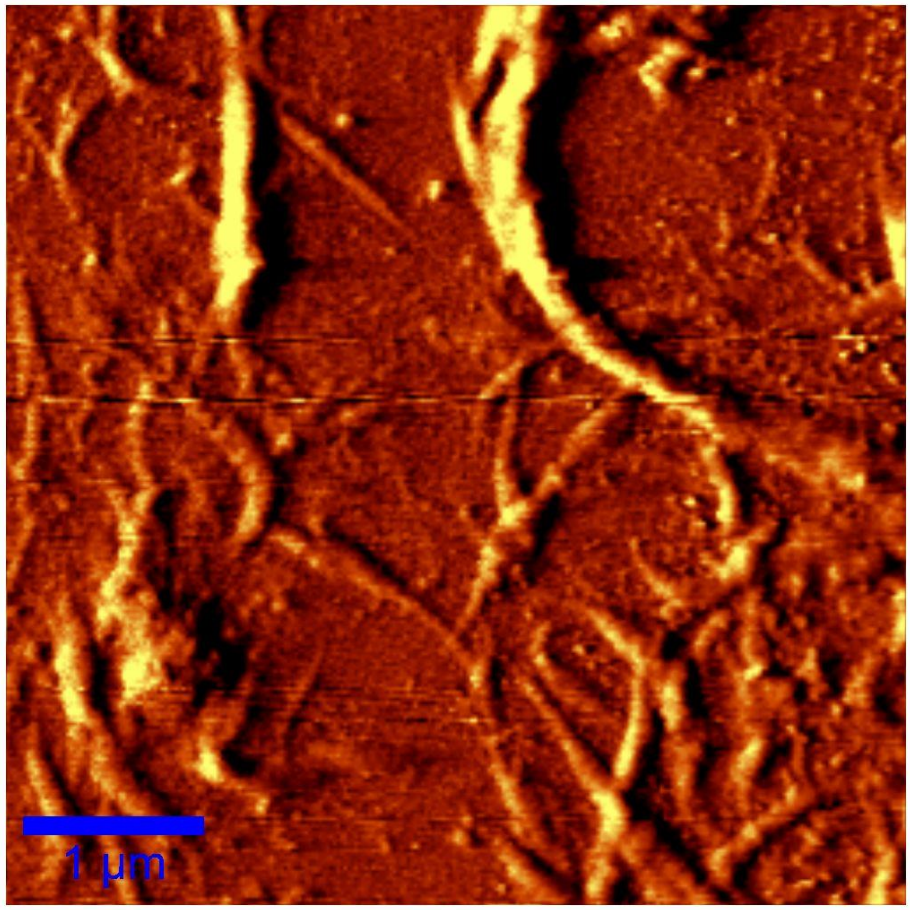
Collagen Patterning

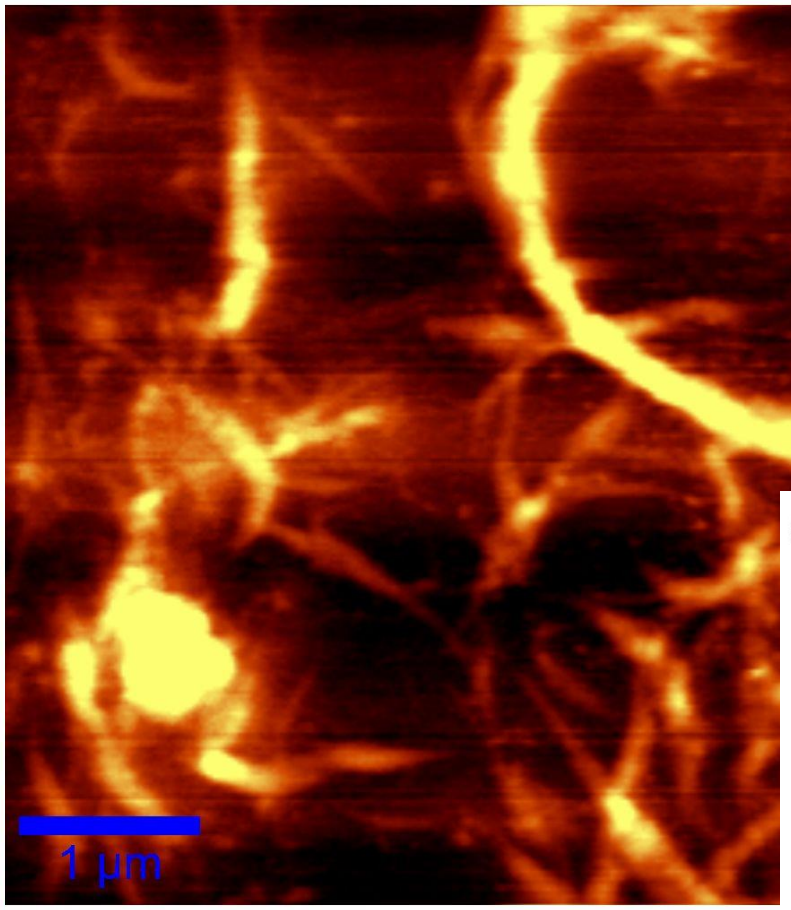


Collagen Patterning



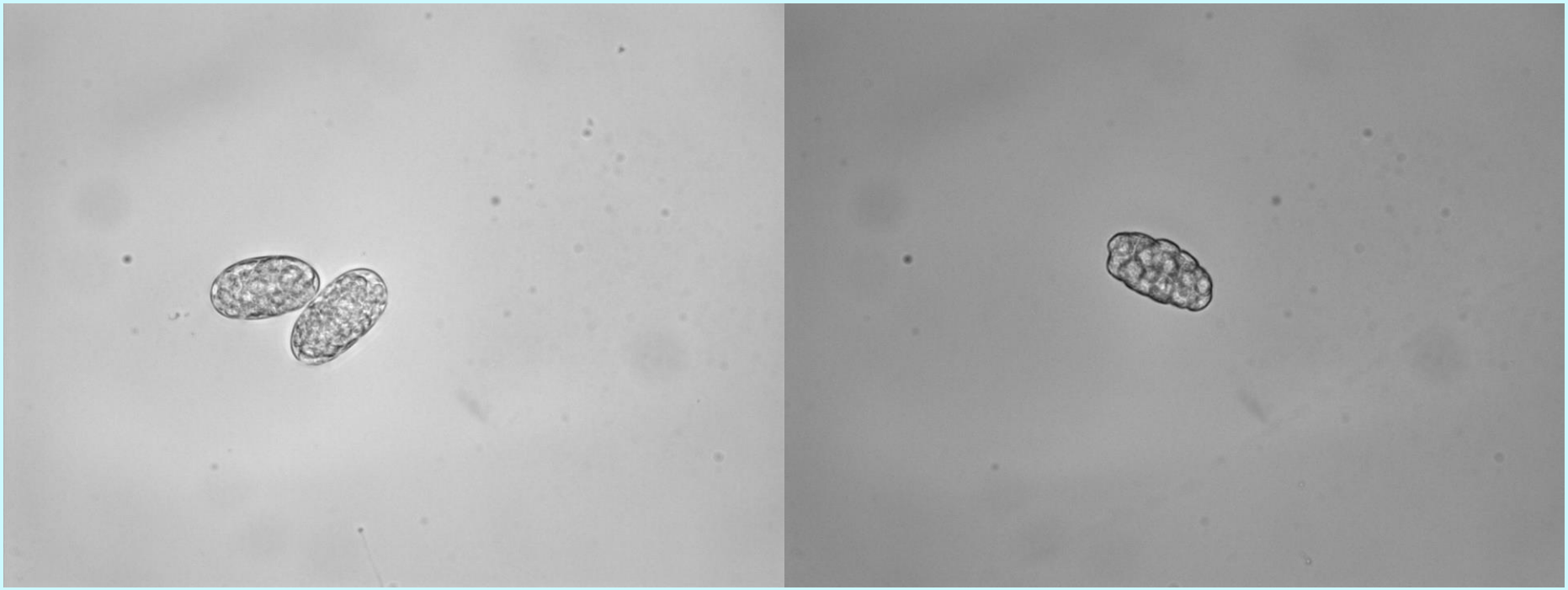
Collagen Patterning



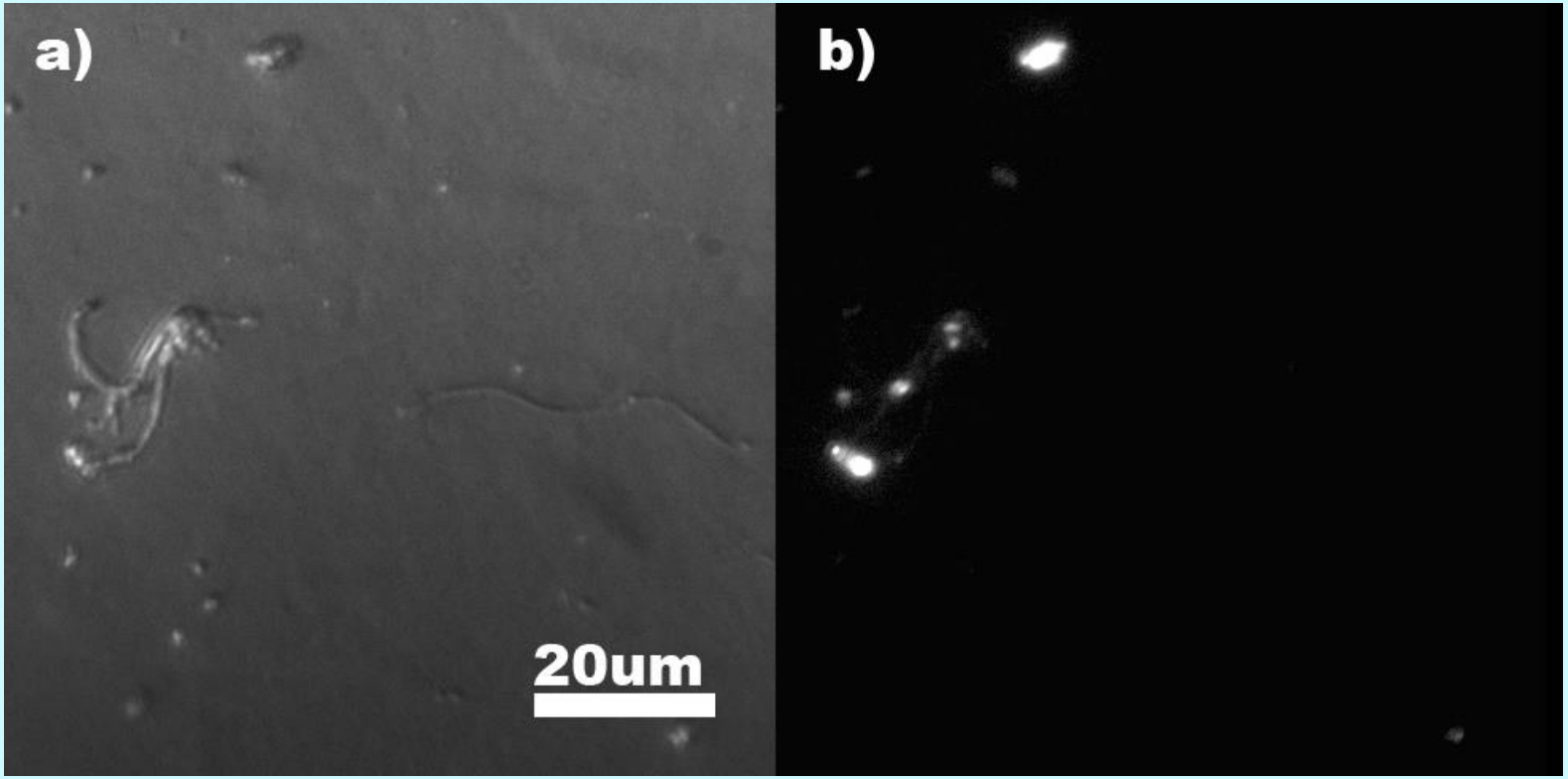


Cell Culture

- Egg dissociation seems to be working, monitoring samples on microscope



Cell Culture



Cell Culture

- UNC-119 (unc-119::GFP) worked and we saw cell differentiation and GFP in neurons.
  - First expressed in neurons in embryos of 60 cells (comma stage)
- We are working on UIS-31 (mec-17::GFP)
  - No info on when expressed

Cell Culture

- Timing of GFP expression and FACS
- For now, assume that we need to plate UIS-31 cells before sorting (improve signal)
  - Trypsin-EDTA or remove calcium?

Problems

- Current time from synchronized eggs to gravid worms is long
  - 15C = 6 days
    20C = 4 days
    RT = shorter?
- Need to enrich, scanning is bad

Next Work

- Dissociate more UIS-31 eggs and plate on PLL control, uniform collagen, patterned collagen
- Use FACS to enrich and then plate again
  - Egg dissociation on WT for calibration
- Patch clamp, measure voltage gated channels and mechanosensitivity (options = hair, cantilever, AFM)
- Ca^{2+} for same as above

Review

- Microfluidic Patterning of Collagen
  - Capillary filling works, need to redesign channels for pressure driven flow
- Microcontact Printing Collagen
  - No success yet, printing monomers works
- Primary TRN Cell Culture
  - Beginning to work, need to start enrichment
- Real-Time Automatic Worm Tracking
  - Same as last time