Using ImageJ to Improve Fluorescence Microscopy Images
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Introduction
We use microscopy to make the invisible visible – that is, to see great detail in tiny three-dimensional objects. However, the process of capturing images from a microscope is imperfect, so we use various computer programs to improve microscopy output.

Datasets
- C. elegans embryo – three channels (shown here in RGB form) [1]
- cameraman.tif – 8-bit grayscale image [2]

Tools
- ImageJ – open-source scientific image processing software [3]
  - Plugins – additional programs that can be installed into ImageJ and provide additional functionality
  - Macros – Java scripts that execute ImageJ functions in sequence [5]

Conclusion
We have learned about the use of computational imaging tools to recreate the microscopic imaging process and improve output images. However, the project is still a work-in-progress; we have not yet recreated the process from start to finish with our own dataset or with different microscope settings.

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References