# Microscopic BioArt

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## Introduction

- BioArt is a form of art that utilizes living subjects and samples as the basis for artistic works.[1]
- Merges the seemingly opposing disciplines of science and art.
- Provides not only new opportunities for artists, but also new opportunities and perspectives for scientists, highlighting how the fields can benefit from each other.[2]
- In this project, we create artistic photographs of live microscopic samples using various light microscopy techniques with the ultimate goal of creating a final image submission for the Nikon Small World Contest.
- The results of this project consist of a small collection of visually appealing images of aeolosoma captured using differential interference contrast (DIC).
  - Aeolosoma are a species of fresh-water annelid, or segmented worm.[3, 4]

## Methodology

- Creating the final set of images required sample selection, preparation, image capture, and post-processing.
- All images were captured using a Nikon Ni-U microscope set in DIC with 4x, 20x, and 40x objectives.
  - Images were technically captured with a Nikon camera attached to the microscope and accompanying Nikon computer software.
- Final images were selected and post-processed in Photoshop.

## References

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## Results

- This projected ultimately resulted in four images of aeolosoma captured using DIC.
- A range of objectives were chosen to best capture different parts of the aeolosoma sample.
- Each image is visually pleasing in its own regard, achieving artistic value through color, contrast, abstraction, or dynamism.

## Conclusions

- Strengths of this project include interdisciplinarity and numerous opportunities for creativity and artistic expression.
- Limitations include difficulty obtaining clear images and limited working time due to use of living samples.
- Continued work on this project will involve selecting a final image to submit to the Nikon Small World Contest based on image quality and artistic value and completing any final edits necessary before submission.
- Working with live samples presents an opportunity for artistic microscopic videography along with photography in this project. In addition, the Nikon Small World contest provides a category for microscopy videography that future researchers could create submissions for.

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