

# Laura C. Murphy, Ph.D.

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📍 Edinburgh, UK

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- An adaptable bioimage analyst with 5+ years of experience
- Handles analysis from a diverse array of microscopy data
- Able to efficiently manage multiple concurrent projects.
- Passionate about data analysis, presentation and interpretation in biomedical research.

## Current Position

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### **BioImage Analyst**

January 2017 – present

Institute of Genetics and Cancer  
University of Edinburgh

I oversee analysis of microscopy data for of the institute, covering a range of research areas. I achieve this through developing and implementing algorithms in collaboration with users to achieve their research outcomes. I also create materials and teach regular workshops aimed at increasing understanding of image analysis concepts as well as software usage.

## Other Experience

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### **Visiting Scientist**

January 2018 – February 2018

Broad Institute  
Cambridge, Massachusetts

I was awarded a grant (NEUBIAS STSM) to spend six weeks in the lab that develops the image analysis software, CellProfiler. While there, I created and adapted image analysis pipelines for their collaborators, contributed to online resources and shadowed the development team.

### **Ph.D. student**

Sept 2012 – March 2017

Institute of Genetics and Cancer  
University of Edinburgh

I studied trafficking of axonal mitochondria in cultured neurons from a novel mouse model by utilising fluorescence microscopy as well as a range of molecular biology and biochemical techniques.

### **Research assistant**

Aug 2011 – Sept 2012

Autism Research Centre  
University of Cambridge

I performed bioinformatics analyses for genetic studies and had responsibility over the database of individuals who had donated DNA. This included recruitment of and being point of contact for the donating individuals as well as responsibility over their data and related ethics applications.

## Skills

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### Laboratory skills

Microscopy image analysis using both open-source and commercial software packages (ImageJ/FIJI, QuPath, CellProfiler, Ilastik, Imaris, Definiens, Napari). Light microscopy, mouse work, neurobiology, cell biology.

### Computational

Knowledge of R, Groovy, Python languages. Version control with Git. Use of HPC computing. Containerization using Singularity. Workflow management with Snakemake.

### Teaching

In my current position facility I regularly train individuals how to use image analysis software in workshop settings as well as one-on-one situations. I also have informally mentored students in my current post as well as while working towards my PhD.

## Education

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<b>2012 – 2017</b>	<b>Ph.D. in Molecular Medicine</b> <i>"Mitochondrial trafficking in a mouse model of psychiatric illness."</i>	University of Edinburgh
<b>2010 – 2011</b>	<b>M.Sc. in Human Molecular Genetics</b> Result: Distinction	Imperial College London
<b>2006 – 2010</b>	<b>B.Sc. (Hons) in Genetics</b> Result: Upper second class honours	University of Glasgow

## Scientific contributions

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- 10 primary research papers and 1 review paper
- Review Editor on Editorial Board of Computational BioImaging section, Frontiers in Bioinformatics
- Committee member of RMS Data Analysis in Imaging Section
- EMBL Deep Learning for Image Analysis 2022: Trainer
- EMBO Advanced Methods in Bioimage Analysis 2021: Trainer
- NEUBIAS Training School 8 2018: Scientific Organiser