

Alexandra Pike

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EDUCATION

Doctor of Philosophy, Psychiatry 2015-present
Merton College, University of Oxford
Supervisors: Professor Philip Cowen and Professor Rebecca Park
Provisional title: Compulsivity and eating disorders: neural, computational and pharmacological approaches.

Master of Science, Neuroscience 2014-2015
Merton College, University of Oxford
Awarded September 2015

Bachelor of Arts, Psychology and Philosophy 2011-2014
New College, University of Oxford
Congratulatory 1st Class Honours Degree
Gibbs prizes for performance on psychology and philosophy papers

RESEARCH EXPERIENCE

D.Phil Projects

Compulsivity and Recovered Anorexia: an MRI study 2016-present
Investigating brain activity using 1) a task which probes compulsivity 2) resting state MRI in those who have recovered from anorexia nervosa and healthy controls.

- Lead investigator responsible for day-to-day running of this multi-modal MRI study.
- Worked with external collaborators to select and implement an fMRI compulsivity task.
- Worked with external collaborators and Oxford researchers to implement a cutting-edge multi-echo acquisition method for the resting state MRI.

Glutathione Levels and Compulsivity 2015-present
Using N-acetyl cysteine in an at-risk group for eating disorders to investigate whether increasing brain glutathione decreases markers of compulsivity.

- Lead investigator responsible for day-to-day running of the study including design, data collection and analysis.
- Trained in and achieved competence in phlebotomy for small venous blood samples.
- Analysed data using R and MATLAB, including implementing a computational model of one of the tasks used.
- Currently preparing a manuscript for submission.

Eating Disorders and Learning about Causal Statistics 2017-present
Additional supervision: Dr Michael Browning.
A computational study to examine whether eating disorder risk groups display cognitive inflexibility because they do not learn relevant statistics about the environment.

- Lead investigator responsible for day-to-day running of the study.
- Learnt how to fit computational models to the behavioural data.

- Learnt how to analyse eye-tracking data.

MSc Projects

Completed two MSc projects, assessed by viva and dissertation 2014-2015

- Became comfortable with two new research environments in areas of neuroscience I had no previous familiarity with.
- Learnt the basics of cell culture, PCR, qPCR and other molecular biology techniques.
- Also learnt how to perform in-vivo cyclic voltammetry.

Undergraduate Research

3rd Year Undergraduate Project: Distractor inhibition 2013-2014
Attention Group, Oxford Centre for Human Brain Activity, University of Oxford

- Studied whether ability to inhibit distractors (measured using a novel computer task) was related to depression and anxiety symptomatology.

Two undergraduate research assistant positions 2012-2013
Worked in two separate Oxford labs (The Psychopharmacology and Emotion Research Lab, and the Brain and Cognition Lab).

- One Research Assistant position was funded by the British Psychological Society.
- Gained experience in psychopharmacology, participant recruitment and experiment troubleshooting.

TEACHING

Undergraduate tutorials for First Bachelor of Medicine Part 2 2016-2018
Jesus College, Oxford. Taught Psychology for Medicine to four second-year medical students for two consecutive years.

Undergraduate tutorials for Psychology Prelims 2016-2017
Jesus College, Oxford. Taught 14 of the 16 tutorials for Preliminary Examinations in Psychology, covering Perception, Developmental Psychology, Cognitive Psychology and Biological Psychology.

Undergraduate tutorials for Biomedical Sciences Part I 2016-2017
St John's College, Oxford. Taught two tutorials on the topic of Personality, Individual Differences and Psychological Disorders for a second year Biomedical Sciences student.

Demonstrating in Neuroanatomy for First Bachelor of Medicine 2017

PUBLICATIONS Park, R.J., Singh, I., **Pike, A.C.**, Tan, J.O.A., Deep brain stimulation for Psychiatric Disorders: Hope for the Hopeless or Exploitation of the Vulnerable? The Oxford Neuroethics Gold Standard Framework. *Frontiers in Psychiatry*. 2017 March 8;44.

Godlewska, B.R., **Pike, A.**, Sharpley, A.L., Ayton, A., Park, R.J., Cowen, P.J., & Emir, U.E. Brain glutamate in anorexia nervosa: A magnetic resonance spectroscopy case control study at 7 Tesla. *Psychopharmacology*. 2016 Dec 1;234(3):421-6.

Noonan M.P., Adamian N., **Pike A.**, Printzlau F, Crittenden BM, Stokes MG. Distinct Mechanisms for Distractor Suppression and Target Facilitation. *The Journal of Neuroscience*. 2016 Feb 10;36(6):1797-807.

EXTERNAL PRESENTATIONS	SOBP Annual Meeting	2018
	New York, USA (Poster Presentation) ECNP Junior Scientists Workshop	2018
	Nice, France (Junior Speaker and Poster Presentation)	
	Invited Speaker at Anxiety Disorders Residential Unit	2018
	Bethlem Royal Hospital, UK (External Speaker)	
	British Association for Psychopharmacology Summer Meeting	2017
	Harrogate, United Kingdom (Poster Presentation)	
	International Conference on Eating Disorders	2017
	Prague, Czech Republic (Paper presentation)	
	The Brain Conference on New Insights into Psychiatric Disorders	2016
	Copenhagen, Denmark (Poster presentation)	
AWARDS	LSNeuron Conference	2016
	London, UK (Poster presentation)	
	Neuroscience Symposium	2015
	Oxford, UK (Poster presentation)	
	EBPS Computational Approaches Workshop Travel Awardee	2018
	British Association of Psychopharmacology Travel Bursary	2017
	Department of Psychiatry & Medical Research Council DPhil Studentship	2015
	Congratulatory First Class Degree	2014
	Gibbs Prize for Best performance in the Philosophy papers in PP Finals	2014
	Gibbs Prize for Best performance in the Psychology papers in PP Finals	2014
	New College Academic Scholarship	2012-2014
TRAINING	British Psychological Society Funded Research Assistant	2013
	Computational Psychiatry Satellite, SOBP Annual Meeting	2018
	BNA Neuroinformatics tutorial , London	2018
	Computational Psychiatry Course , Zurich	2017
	Software Carpentry Workshop including R, Git, Bash	2017
	Teaching and Learning Part 1 and 2 teaching course	2017
	Starting to think like a Programmer	2017
	FMRIB Graduate Course on MRI physics and analysis of MRI data	2015-2016
	The anatomy of the limbic brain course , London	2016
	Phlebotomy training	2016
	Writing skills: reports training course	2016
PUBLIC ENGAGEMENT	Writing skills: thesis writing training course	2015
	PubHD	2017
	Presented my DPhil ideas and experiments in ten minutes to a general audience	
	Science Museum Lates & Royal Society	2015-2017
	Helped with the "Neurococktails" event on genes and drugs of abuse	
	Merton MCR Colloquium Series	2017
	Presented some of the key ideas behind my research to a general audience	
	Oxfordshire Science Festival	2016
	Helped with an event focusing on emotion recognition research and its applications	