

# Laura L. Grima, D.Phil.

Postdoctoral Associate  
HHMI Janelia

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## Research Positions

Sep. 2019 – present	<b>Postdoctoral Associate, HHMI Janelia</b> Dudman Lab, Mechanistic Cognitive Neuroscience
Nov. 2018 – Aug. 2019	<b>Postdoctoral Research Associate, University of Oxford</b> Walton Lab, Department of Experimental Psychology
July – Oct. 2016	<b>Visiting Scientist, Champalimaud Centre for the Unknown, Portugal</b> Paton Lab

## Education

2014 – 2018	<b>D.Phil. Experimental Psychology, University of Oxford</b> <i>Investigating the neurochemical basis of action initiation, selection, and inhibition</i> Supervised by Prof. Mark Walton and Prof. Masud Husain External examiner: Prof. Trevor Robbins (University of Cambridge) Internal examiner: Prof. Rafal Bogacz
2013 – 2014	<b>M.Sc. Psychological Research, University of Oxford</b> Supervised by Prof. Masud Husain and Dr. Matthew Apps
2010 – 2013	<b>B.Sc. Psychology, Royal Holloway University of London</b> Supervised by Dr. Jonas Larsson and Dr. Steve Hammett

## Publications in preparation

- Grima, L. L.**, Akam, T., Cinotti, F., Sarra, D., & Walton, M. Mesolimbic dopamine is modulated by local and global environmental richness.
- Grima, L. L.**, Haberkern, H., Mohanta, R., Morimoto, M., Rajagopalan, A., & Scholey, E. Bridging diverse perspectives on the mechanistic basis of foraging (review).

## Preprints

- Grima, L. L.**, Guo, Y., Narayan, L., Hermundstad, A. M., & Dudman, J. T. (2024). A global dopaminergic learning rate enables adaptive foraging across many options.  
<https://www.biorxiv.org/content/10.1101/2024.11.04.621923v1>

## Peer-reviewed publications

- Grima, L. L.**, Panayi, M. C., Harmson, O., Syed, E. C. J., Manohar, S. G., Husain, M., & Walton, M. E. (2022). Nucleus accumbens D1-receptors regulate and focus transitions to reward-seeking action. *Neuropsychopharmacology*.
- Harmson, O.\*, **Grima, L. L.\***, Panayi, M. C., Husain, M., & Walton, M. E. (2022). 5-HT<sub>2C</sub> receptor perturbation has bidirectional influence over instrumental vigour and restraint. *Psychopharmacology*, 239, 123-140. \* *Equal contribution*

Chong, T.-J., Apps, M., Giehl, K., Sillence, A., **Grima, L. L.**, & Husain, M. (2017). Neurocomputational mechanisms underlying subjective valuation of effort costs. *PLoS Biology*, 15(2), e1002598.

Syed, E. C. J., **Grima, L. L.**, Magill, P. J., Bogacz, R., Brown, P., & Walton, M. E. (2016). Action initiation shapes mesolimbic dopamine encoding of future rewards. *Nature Neuroscience*, 19(1), 34-36.

Apps, M. A. J., **Grima, L. L.**, Manohar, S., & Husain, M. (2015). The role of cognitive effort in subjective reward devaluation and risky decision-making. *Scientific Reports*, 5, 16880.

## Grants, Fellowships, and Awards

Please note that as researchers working at Janelia are not permitted to receive grant funding, I have not submitted any grants during my current position.

July 2018	Presentation Prize, MSD D.Phil. Day, University of Oxford
Jan. – June 2018	<b>Goodger &amp; Schorstein Scholarship (£6,000), University of Oxford</b>
August 2017	Research Training Support Grant (£1,300), ESRC
August 2017	Travel Grant (£1,000), Guarantors of Brain
July 2017	Special Grant (£630), St. John's College, Oxford
July 2017	Best Poster Award, FENS/SfN Summer School
September 2016	Special Grant (£620), St. John's College, Oxford
September 2016	Competitive Travel Grant (€500), Dopamine 2016
July 2016	Academic Travel Award (£500), Santander
July 2016	Research Training Support Grant (£170), ESRC
July – Oct. 2016	<b>Overseas Institutional Visit Grant (£1,900), ESRC</b>
October 2015	Travel Grant (£800), Guarantors of Brain
October 2015	Special Grant (£800), St. John's College, Oxford
May 2015	Research Training Support Grant (£600), ESRC
2014 – 2017	<b>Full D.Phil. funding (£61,800), ESRC &amp; St. John's College, Oxford</b>

## Invited talks

January 2025	Emerging Neuroscientists Seminar Series, Sainsbury Wellcome Centre
May 2024	Monitoring Molecules in Neuroscience, UNC Chapel Hill
February 2024	Janelia conference: the Mechanistic Basis of Foraging
October 2023	School of Psychology & Neuroscience Seminar, University of Glasgow
January 2023	Physiology, Pharmacology, & Neuroscience Seminar, University of Bristol
November 2022	University of California, Santa Barbara
June 2020	FENS 2020, Virtual Forum
May 2019	9 <sup>th</sup> International Symposium on the Biology of Decision-Making, Oxford
January 2019	Department of Psychology Seminar Series, Royal Holloway
October 2018	Dudman Lab, HHMI Janelia
July 2018	MSD D.Phil. Day, University of Oxford
July 2017	Department of Psychology Seminar Series, University of York
February 2017	Lecture Supper, St. John's College Oxford
February 2017	D.Phil. Seminar Series, Experimental Psychology, University of Oxford

## Selected Poster Presentations

**Grima, L. L.**, Guo, Y., Hermundstad, A., & Dudman, J. T. (2024). *Mesolimbic dopamine reflects rapid matching across many options*. Gordon Research Conference: Basal Ganglia, Ventura California, U.S.

**Grima, L. L.** & Dudman, J. T. (2022). *Characterising foraging dynamics during naïve learning across many options in time and space*. Society for Neuroscience, San Diego, U.S.

**Grima, L. L.**, Akam, T., & Walton, M. E. (2021). *Average reward rate shapes both tonic and phasic dopamine activity during patch foraging*. Computational and Systems Neuroscience (CoSyNe) online conference.

- Grima, L. L.**, Akam, T., & Walton, M. E. (2020). *Separable contributions of local and global environmental richness to mesolimbic dopamine signalling during foraging*. Virtual Dopamine (ViDA) online conference.
- Grima, L. L.**, Syed, E. C. J., Husain, M., & Walton, M. E. (2017). *Rapid dopamine transmission tracks and promotes reward-seeking actions*. FENS/SfN Summer School: Chemical Neuromodulation, Bertinoro, Italy. **Poster prize awarded.**
- Grima, L. L.**, Syed, E. C. J., Husain, M., & Walton, M. E. (2016). *The encoding of future reward by dopamine release is shaped by action initiation and is implicated in action selection*. Champalimaud Neuroscience Symposium, Lisbon, Portugal.
- Grima, L. L.**, Syed, E. C. J., Husain, M., & Walton, M. E. (2016). *D1 receptor stimulation causes impulsive action initiation and action selection*. Dopamine 2016, Vienna, Austria.
- Grima, L. L.**,\* Apps, M. A. J.,\* & Husain, M. (2015). *Cognitive effort: subjective reward devaluation and risk sensitivity*. 5<sup>th</sup> International Symposium on Biology of Decision-Making, Paris, France.

## Teaching and Supervision

2021	Co-mentor, Janelia-Meyerhoff Undergraduate Summer Program
2017 – 2019	Visiting Lecturer, <i>Brain and Behaviour</i> , Royal Holloway University of London
2017 – 2018	Supervision of Sebastian Andersson and Freya Marijatta, M.Sc. Neuroscience projects Tutor, <i>Brain Anatomy Practical</i> , Royal Holloway University of London
2015 – 2019	Supervision of visiting student Oliver Harmson
2015 – 2016	Teaching and Learning Skills Course, University of Oxford
Oct. 2015	

## Professional Service

2024	Co-organiser of Janelia conference on foraging
2021-2023	Co-organiser of The Future of Foraging seminar series (online)
2016 – 2017	President of the Bryant Society for Experimental Psychologists, Oxford
2016 – 2017	ESRC doctoral training centre Scholars' Association Secretary, Oxford
2015 – 2017	Vice Chair of Graduate Joint Consultative Committee, Department of Experimental Psychology, Oxford
2011 – 2013	Psychology Student Representative, Royal Holloway University of London
Journal review	eLife, Neuropsychopharmacology, Journal of Neuroscience Research, Current Opinion in Behavioral Sciences, Journal of Experimental Psychology: General
Conference review	CoSyNe