

BIOGRAPHICAL SKETCH

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NAME: Bates, Alexander

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Research Fellow in Neurobiology

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
University College London, London	BS	07/2015	Neuroscience
University of Cambridge, Cambridge	PHD	02/2021	Neuroscience

A. Personal Statement

I am a neuroscientist and computational biologist specialising in neuroanatomy, neurophysiology and connectomics of the insect brain. My research focuses on understanding how neural circuits wire to generate complex behaviours, including olfactory processing and animal navigation. I develop open-source tools for neuroanatomical analysis and collaborate internationally on connectomics projects. In the wetlab, I use virtual reality and calcium imaging experiments to interrogate neurobiological circuits in living, behaving flies.

1. Bates AS, Phelps JS, Kim M, Yang HH, Matsliah A, Ajabi Z, Perlman E, Delgado KM, Osman MAM, Salmon CK, Gager J, Silverman B, Renauld S, Collie MF, Fan J, Pacheco DA, Zhao Y, Patel J, Zhang W, Serratosa Capdevilla L, Roberts RJV, Munnely EJ, Griggs N, Langley H, Moya-Llamas B, Maloney RT, Yu SC, Sterling AR, Sorek M, Kruk K, Serafetinidis N, Dhawan S, Stürner T, Klemm F, Brooks P, Lesser E, Jones JM, Pierce-Lundgren SE, Lee SY, Luo Y, Cook AP, McKim TH, Kophs EC, Falt T, Negrón Morales AM, Burke A, Hebditch J, Willie KP, Willie R, Popovych S, Kemnitz N, Ih D, Lee K, Lu R, Halageri A, Bae JA, Jourdan B, Schwartzman G, Demarest DD, Behnke E, Bland D, Kristiansen A, Skelton J, Stocks T, Garner D, Salman F, Daly KC, Hernandez A, Kumar S, Dorkenwald S, Collman F, Suver MP, Fenk LM, Pankratz MJ, Jefferis GSXE, Eichler K, Seeds AM, Hampel S, Agrawal S, Zandawala M, Macrina T, Adjavon DY, Funke J, Tuthill JC, Azevedo A, Seung HS, de Bivort BL, Murthy M, Drugowitsch J, Wilson RI, Lee WA. Distributed control circuits across a brain-and-cord connectome. *bioRxiv*. 2025 Aug 2; PubMed Central PMCID: PMC12324551.
2. Eckstein N, Bates AS, Champion A, Du M, Yin Y, Schlegel P, Lu AK, Rymer T, Finley-May S, Paterson T, Parekh R, Dorkenwald S, Matsliah A, Yu SC, McKellar C, Sterling A, Eichler K, Costa M, Seung S, Murthy M, Hartenstein V, Jefferis GSXE, Funke J. Neurotransmitter classification from electron microscopy images at synaptic sites in *Drosophila melanogaster*. *Cell*. 2024 May 9;187(10):2574-2594.e23. PubMed Central PMCID: PMC11106717.
3. Bates AS, Schlegel P, Roberts RJV, Drummond N, Tamimi IFM, Turnbull R, Zhao X, Marin EC, Popovici PD, Dhawan S, Jamasb A, Javier A, Serratosa Capdevila L, Li F, Rubin GM, Waddell S, Bock DD, Costa M, Jefferis GSXE. Complete Connectomic Reconstruction of Olfactory Projection Neurons in the Fly Brain. *Curr Biol*. 2020 Aug 17;30(16):3183-3199.e6. PubMed Central PMCID: PMC7443706.
4. Bates AS, Manton JD, Jagannathan SR, Costa M, Schlegel P, Rohlfing T, Jefferis GS. The natverse, a versatile toolbox for combining and analysing neuroanatomical data. *Elife*. 2020 Apr 14;9 PubMed Central PMCID: PMC7242028.

B. Positions, Scientific Appointments and Honors

Positions and Scientific Appointments

2020 - Research Fellow in Neurobiology, Harvard Medical School, University of Oxford, Cambridge, MA

Honors

2022 - 2026	Sir Henry Wellcome Fellowship, Wellcome Trust
2021 - 2022	EMBO Fellow, European Molecular Biology Organization
2015 - 2019	Herchel Smith PhD Scholarship, The University of Cambridge
2015 - 2019	Honorary Vice Chancellor's Award, University of Cambridge
2016 - 2018	Boehringer Ingelheim PhD Scholarship, Boehringer Ingelheim Fonds
2013 - 2015	Burnstock Prize, UCL Neuroscience Programme
2013 - 2014	Dean's list, University College London
2020	Max Perutz Prize, MRC LMB
2020	BNA Postgraduate Prize, British Neuroscience Association
2015	Rob Clarke Award, Society of Physiology
2015	University of Queensland Winter Scholarship, University of Queensland
2014	Amgen Scholarship, Amgen

C. Contribution to Science

1. Acted as a reviewer for Nature Communications, Plos Computational Biology, eLife, COSYNE and UKRI Grants
2. Helped to create and maintain open-source tools for neuroanatomical research (natverse.org)
 - a. Bates AS, Manton JD, Jagannathan SR, Costa M, Schlegel P, Rohlfing T, Jefferis GS. The natverse, a versatile toolbox for combining and analysing neuroanatomical data. *Elife*. 2020 Apr 14;9 PubMed Central PMCID: PMC7242028.
3. Actively curate and maintain public databases for fly connectome data (codex.flywire.ai/?dataset=banc)
 - a. Bates AS, Phelps JS, Kim M, Yang HH, Matsliah A, Ajabi Z, Perlman E, Delgado KM, Osman MAM, Salmon CK, Gager J, Silverman B, Renauld S, Collie MF, Fan J, Pacheco DA, Zhao Y, Patel J, Zhang W, Serratosa Capdevilla L, Roberts RJV, Munnely EJ, Griggs N, Langley H, Moya-Llamas B, Maloney RT, Yu SC, Sterling AR, Sorek M, Kruk K, Serafetinidis N, Dhawan S, Stürner T, Klemm F, Brooks P, Lesser E, Jones JM, Pierce-Lundgren SE, Lee SY, Luo Y, Cook AP, McKim TH, Kophs EC, Falt T, Negrón Morales AM, Burke A, Hebditch J, Willie KP, Willie R, Popovych S, Kemnitz N, Ih D, Lee K, Lu R, Halageri A, Bae JA, Jourdan B, Schwartzman G, Demarest DD, Behnke E, Bland D, Kristiansen A, Skelton J, Stocks T, Garner D, Salman F, Daly KC, Hernandez A, Kumar S, Dorkenwald S, Collman F, Suver MP, Fenk LM, Pankratz MJ, Jefferis GSXE, Eichler K, Seeds AM, Hampel S, Agrawal S, Zandawala M, Macrina T, Adjavon DY, Funke J, Tuthill JC, Azevedo A, Seung HS, de Bivort BL, Murthy M, Drugowitsch J, Wilson RI, Lee WA. Distributed control circuits across a brain-and-cord connectome. *bioRxiv*. 2025 Aug 2; PubMed Central PMCID: PMC12324551.