

Jonathon Alexis Coates

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Summary statement

- Ambitious and independent researcher; currently a post-doc in the Voisin lab at the William Harvey microvascular research institute, QMUL, investigating the role of neutrophils and T-cells in ischemia-reperfusion injury
- Interests include immune cell biology, glycosylation and meta-research.

Education

Ph.D.	2015-2019	Immunology & Molecular biology , University of Sheffield. Thesis: Macrophage heterogeneity in <i>Drosophila melanogaster</i> . Supervisors: Iwan Evans & Martin Zeidler
MRes	2014-2015	Immunobiology , Newcastle University. Thesis: IL-1 α in arthrofibrosis pathogenesis. Supervisor: Lee Borthwick & Prof Andrew Fisher
B.Sc.	2010-2013	Biomedical Science , University of Northumbria. Awarded Dean's list for outstanding academic achievement.

Research experience

BHF funded Postdoctoral Research Assistant (2020 - Present)

- Investigating the role of neutrophil-T-cell interactions in IRI utilizing confocal and intravital microscopy, flow cytometry, sequencing and cardiac function assays.
- Member of the PhD-Postdoc committee and research affiliate at Hughes Hall College, University of Cambridge.

Postdoctoral Research Scientist (2019-2020)

- Investigated the role of hypoxia in controlling the transcriptional landscape and DNA accessibility in cytotoxic T lymphocytes.
- Developed skills in RNAseq, primary T cell culture, proteomics, flow cytometry and mammalian models (mice) and established a range of protocols new to the lab such as qPCR, RNAseq and ChIPseq.
- Post-doctoral Research Associate at Hughes Hall College (£1000 stipend) & member of post-doc committee.

PhD researcher (2015-2019)

- Uncovered the existence of macrophage subtypes in *Drosophila* and demonstrated functional differences between the populations. Determined that populations can be manipulated by altering cellular metabolism or apoptotic burden (manuscript on bioRxiv).
- Developed skills in confocal and lightsheet microscopy, immunostaining, standard molecular biology techniques, *Drosophila* husbandry and genetics. Also utilized various *in vivo* macrophage functional assays, such as wounding, infection and migration assays.

- Established a range of assays new to the lab including larval macrophage assays, lightsheet microscopy and qPCR.
- Acted as a PI for the 2016-2017 Sheffield iGEM team; Co-developed the project and designed the experimental plan with a £50,000 budget. Independently led the project for its duration, training and managing a team of 17 (10 undergraduates, 5 PhD students and 2 postdocs).
- Awarded best presentation in the BMS departmental symposium (2016, 2018) and best poster in the faculty of science poster day (2017). Received the Ian Peake award for contributions to the department and its wider reputation.

MRes researcher (2014-2015)

- 6-month project investigating the role of IL-1 α in arthrofibrosis pathogenesis in the laboratory of Professor Andrew Fisher and Dr Lee Borthwick (position extended into summer).
- Primarily utilized qPCR, ELISA and MSD multiplex assays on primary human fibroblast cell cultures. Some experience in isolating and culturing primary human lung macrophages.

Teaching experience

- Developed the Preprints and Publishing in the Life Sciences syllabus and course materials; ASAP Bio, 2021
- Designed a 6-week project and supervised a medical placement student; University of Sheffield, 2018.
- Supervised a multidisciplinary team of 10 undergraduate students and 8 postgraduate advisors as part of iGEM; University of Sheffield, 2016-2017.
- Demonstrated on a *Drosophila* embryonic development module (BMS327), supervising undergraduate students in immunostaining of embryos and marking exam scripts; University of Sheffield, 2018.
- Taught A-level biology classes twice weekly which involved designing and implementing lesson plans for classes of up to 25 students; City of Sunderland College, 2012, 2014-2015.
- Privately tutored multiple students; City of Sunderland College, 2012-2016.

Publications

151 citations; Google Scholar Profile: <https://bit.ly/3mNWx9D>

Brierley L., Nanni F., Polka J.K., Dey G., Pálffy M., Fraser N., **Coates J.A***. (2021) Tracking changes between preprint posting and journal publication. *PLOS Biology* – *in press*

*As corresponding author

Fraser N., Brierley L., Dey G., Polka J.K., Pálffy M., Nanni F., **Coates J.A***. (2021). The evolving role of preprints in the dissemination of COVID-19 research and their impact on the science communication landscape. *PLOS Biology* 19: e3000959. doi:10.1371/journal.pbio.3000959

*As corresponding author

Coates J.A., Brooks E., Brittle A.L., Armitage E.L., Zeidler M.P., Evans I.R. (2021). Identification of functionally distinct macrophage subpopulations in *Drosophila*. *eLife*. 2021;10: e58686. doi:10.7554/eLife.58686

Roddie H.G., Armitage E.L., **Coates J.A.**, Johnston S.A., & Evans I.R. (2019). Simu-dependent clearance of dying cells regulates macrophage function and inflammation resolution. *PLOS Biology* 17, e2006741.

Dixon D., **Coates J.**, del Carpio Pons A., Horabin J., Walker A., Abdul N., Kalson N.S., Brewster N.T., Weir D.J., Deehan D.J., et al. (2015). A potential mode of action for Anakinra in patients with arthrofibrosis following total knee arthroplasty. *Scientific Reports* 5, 16466.

Awards & funding secured

- Doctoral Academy Award. Competitive award provided part-funding for consumables as part of IGEM; University of Sheffield, 2016. (**£3,000 of £50,000 total**)
- Postgraduate Researcher Experience Programme. Competitive award used for personal development to acquire a home office license; University of Sheffield, 2018. (**£725**)
- BSCB Travel grant; British Society of Cell Biology, 2016. (**£400**)
- Community engagement grant; ASAPbio, 2021. (**£370**)
- Faculty of Sciences Researcher led activity. Competitive funding used for implementing a seminar series; University of Sheffield, 2017. (**£250**)
- Sponsorship. Award used to part-fund PhD student retreat; Elsevier, 2017. (**£200**)
- Student sponsorship. Competitive scheme for qPCR-based research; PrimerDesign, 2017. (silver award)
- COVID-19 relief fund. Funds used to host covidpreprints.com; DigitalOcean, 2020. (**\$250**)

International conferences attended

- British Society of Immunology Congress, 2019; presented, **poster**
- Gene regulation in health and disease, 2019; presented, **talk**
- European Drosophila Research Conference, 2017; presented, **poster**
- World Congress on Inflammation, 2017
- BSCB/BSDB Joint spring meeting, 2016
- iGEM Giant Jamboree, 2016; Awarded gold medal and nominated for best diagnostic project

Invited talks

- **Science Writers, 2021** – “Preprinting a pandemic”
- **Society for Scholarly Publishing 43rd meeting, 2021** – “Preprints and the pandemic”
- **Medical School Research Meeting, University of Sheffield, 2021** – “Preprinting a pandemic: trends, dissemination and regulation of COVID-19 preprints”
- **CID webinar series, Cambridge University, 2020** – “Preprinting a pandemic; the role of preprints in the COVID-19 pandemic”

Outreach & public engagement

- **Preprints in Motion Podcast, 2021-Present** – Created, host and produce a podcast focused on ECRs and preprints.
- **Researchers Night, 2016-2018** – Explained the use of *Drosophila* in medical research to schoolchildren and parents.
- **Our immune army, 2017** – Explained the immune system to the general public.
- **Festival of Life, 2016** – Explained phagocytosis and the use of model organisms to the general

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Service to scientific community

- **Peer-review, 2020-Present** – F1000, Frontiers, BMJ Open, SJS
- **UK postdoc slack, 2020 – Present** – Founder
- **Contributor to preLights, 2019-Present** – (a community driven preprint-highlighting service by tCoB); articles available from: <https://prelights.biologists.com/profiles/coatesj/>
- **ASAPbio Fellow, 2020-2021** – advocate for open-access science
- **Covidpreprints.com, 2020** – Interactive timeline charting landmark COVID-19 preprints

Other relevant experience

- Developed a seminar series for PhD students about different careers options, invited and hosted 7 academics.
- Organised the departmental PhD student retreat as chair of the BMS PhD society.
- Selected to attend a leadership course by Rotary International; leading the overnight survival challenge and successfully managing a team of 23.

Referees

Dr Mathieu Benoit-Voisin
Centre for Microvascular Disease
William Harvey Research Institute
Queen Mary, University of London
London
EC1M 6BQ

Dr Iwan Evans
Bateson Center
Firth Court
University of Sheffield
Western Bank
Sheffield
S10 2TN

Dr Phillip Elks
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