

Sophie Edgar-Andrews

DPhil (Oxon) | Data Scientist & Technical Consultant
hello@sophieedgarandrews.com



SKILLS

PROGRAMMING

Professional

Java, R, Shiny, Spring Boot, Maven, TDD, SQL, Git, LANSa, LaTeX

Competent

CSS, JavaScript, MATLAB

TEACHING

Design and execution of bespoke training workshops for major clients on topics including programming and source control.

Supervision and training of students, junior researchers & colleagues.

LANGUAGES

Native English.

Conversational Japanese (JLPT N5).

LINKS

Website: sophieedgarandrews.com

LinkedIn: Sophie Edgar-Andrews

ResearchGate: Sophie Andrews

GitHub: sophieed

EDUCATION

UNIVERSITY OF OXFORD | DOCTOR OF PHILOSOPHY (DPHIL OXON)
Infection, Immunology and Translational Medicine | Sep 2012- Oct 2016

- Thesis: Adaptive Immune Evasion in Clinically Latent HIV Infection
- Wellcome Trust Four-Year Studentship
- Supervised by Professor Sarah Rowland-Jones & Professor Tao Dong

UNIVERSITY OF YORK | BSc (Hons)

Molecular Cell Biology | Sep 2009 – Jul 2012 | York, UK

- First Class Honours with Distinction
- Thesis: Analysing Gene Expression in Microbes Colonizing Humans

EMPLOYMENT

FREELANCE | DATA SCIENCE & TECHNICAL CONSULTANCY

Apr 2020 - Present

Freelance consultant with a focus on public health. My clients include The World Health Organization.

ALFA FINANCIAL SOFTWARE LTD | SOFTWARE ENGINEER

Oct 2017 - Mar 2020

Java Engineer and Implementation Consultant in the FinTech sector. I developed bespoke software enhancements, and worked directly with major clients.

UNIVERSITY OF OXFORD | POSTDOCTORAL RESEARCH FELLOW

Oct 2017 - Mar 2020

Postdoctoral Research Fellow in Viral Immunology. This was a 12-month fixed-term contract funded by the Rosetrees Trust to investigate mother-to-child transmission of HIV in Kenyan infants.

KEY CLIENTS & FELLOWSHIPS

WORLD HEALTH ORGANIZATION | CONSULTANT

Jun 2020 - Present | Remote

Supporting the WHO Health Emergencies Preparedness and Response team with the management and analysis of data in the context of the coronavirus pandemic.

HOKKAIDO UNIVERSITY | VISITING RESEARCH FELLOW

Oct 2015 – Nov 2015 | Sapporo, JP

Visiting academic performing biomedical research in the laboratory of Professors Katsumi Maenaka and Kimiko Kuroki.

CAPITAL MEDICAL UNIVERSITY | VISITING RESEARCH FELLOW

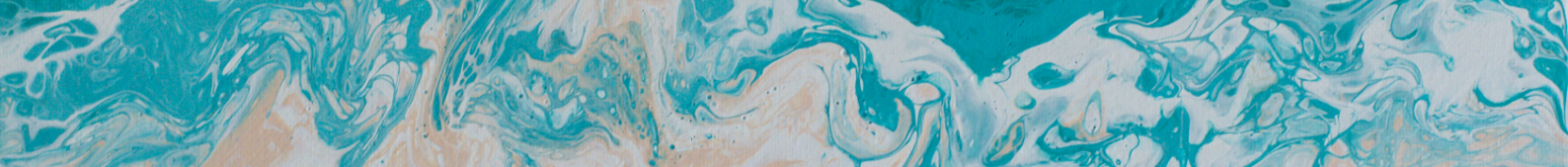
Beijing You'an Hospital | Oct 2014 – Nov 2014 | Beijing, CN

Visiting academic performing biomedical research in the laboratory of Dr Yonghong Zhang.

UNIVERSITY OF TOKYO | RESEARCH INTERN

Jul 2011 – Aug 2011 | Tokyo, JP

Participant of the University of Tokyo Research Internship Programme (UTRIP), working in the laboratory of Professor Shinya Kuroda.



GRANTS, AWARDS AND SCHOLARSHIPS

- 2018 Alfa Financial Software Ltd Hackathon prize
- 2015 British Society of Immunology (BSI) Travel Award (£700)
- 2012 Wellcome Trust Four-Year PhD Studentship (£159,340)
- 2012 York Award for student achievement
- 2012 Department of Biology Award for final year research project

CONFERENCES AND PUBLIC SPEAKING

- 2019 Invited Speaker | Lunchtime Lectures | Hereford Cathedral School | Hereford, UK
- 2018 Invited Speaker | World AIDS Day | Alfa Financial Software Ltd | London, UK
- 2016 Invited Speaker | World AIDS Day | Abingdon School | Oxford, UK
- 2015 Poster presentation | Society for Molecular Biology and Evolution Annual Meeting | Vienna, AU
- 2014 Poster presentation | 19th International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology (VEME) | Rome, IT
- 2014 Invited Speaker | World AIDS Day | St Edmund Hall College, University of Oxford | Oxford, UK

PUBLICATIONS

Hirao, K*, **Andrews, S.***, *et al.* Structure of HIV-2 Nef Reveals Features Distinct from HIV-1 Involved in Immune Regulation. *iScience*, **23**, 1. (2020)

Andrews, SM. *et al.* Analysis of HIV-1 envelope evolution suggests antibody-mediated selection of common epitopes among Chinese former plasma donors from a narrow-source outbreak. *Scientific Reports*, **8**, 5743. (2018)

Farnham, A., Kurz, C., [...] **Andrews, S.**, *et al.* Early career researchers want Open Science. *Genome Biology*, **18**, 221. (2017)

Andrews, SM. & Rowland-Jones, S. Recent advances in understanding HIV evolution. *F1000 Research*, 10876.1. (2017)

Andrews, SM., Wong, G. & Rowland-Jones, SL. The Cellular Immune Response to HIV-2 Infection. In Hope, TJ., Stevenson, M. & Richman, D. (Eds.), *Encyclopedia of AIDS*. New York: Springer. Online ISBN: 978-1-4614-9610-6. (2015)

Andrews, SM. & Pollard, AJ. A vaccine against serogroup B *Neisseria meningitidis*: dealing with uncertainty. *The Lancet Infectious Diseases* **14**, 426–434. (2014)

* Joint first author



RESEARCH EXPERIENCE

UNIVERSITY OF OXFORD | VIRAL IMMUNOLOGY | MAY 2013 – AUGUST 2017

Nuffield Department of Medicine & Weatherall Institute of Molecular Medicine

Immune Evasion in Clinically Latent HIV Infection

- Supervised by Professor Sarah Rowland-Jones and Professor Tao Dong

Investigating the role of two retroviral proteins - negative factor (Nef) and gp120 envelope (Env) - in the evasion of host adaptive immune responses in the context of both HIV-1 and HIV-2 infection. My responsibilities within this research group included designing and carrying out an independent research project - containing both experimental and computational elements - as well as training junior group members on specialised techniques including cloning and cell culture.

HOKKAIDO UNIVERSITY | VIRAL IMMUNOLOGY | OCT 2015 – NOV 2015

Faculty of Pharmaceutical Sciences

- Visiting academic in the group of Professor Katsumi Maenaka

Participated in a short collaborative project with a structural biology group at the University of Hokkaido to resolve the crystal structure of the HIV-2 Nef protein.

CAPITAL MEDICAL UNIVERSITY | VIRAL IMMUNOLOGY | OCT 2014 – NOV 2014

Beijing You'an Hospital

- Visiting academic in the group of Dr Yonghong Zhang

Participated in a short collaborative project with a viral immunology group at Beijing You'an Hospital, where I performed experimental work with HIV-1 cohort samples.

UNIVERSITY OF OXFORD | GENETICS OF NEMATODE IMMUNITY | FEB 2013 – MAY 2013

Department of Biochemistry

*Investigating Gene Expression in *Caenorhabditis elegans**

- Supervised by Professor Jonathan Hodgkin

Investigated inducible expression of invertebrate lysozyme 3 (ilys-3) in the intestine of *Caenorhabditis elegans* in response to infection with *Microbacterium nematophilum*. This project involved performing a mutagenesis screen on worms expressing an ilys-3p::GFP reporter construct, to identify several mutants with abrogated intestinal expression of ilys-3.

UNIVERSITY OF OXFORD | MOLECULAR MICROBIOLOGY | OCT 2012 – JAN 2013

Sir William Dunn School of Pathology

*Development of Multicomponent Chimeric Proteins as Vaccine Candidates Against *Neisseria meningitidis**

- Supervised by Professor Christoph Tang

This project focussed on the development of 12 chimeric *Neisseria meningitidis* proteins for trial as potential vaccine candidates. The project involved a number of techniques such as cloning, protein expression and purification, ELISA and Western blotting. The chimeric proteins were later trialled in mice.

UNIVERSITY OF YORK | MOLECULAR MICROBIOLOGY | OCT 2011 – MAR 2012

Department of Biology

Analysing Gene Expression in Microbes Colonising Humans

- Supervised by Dr James Moir

During my six month final year research placement, the aim of my project was to develop a novel technique for the analysis of microbial gene expression *in situ*, without the requirement for prior culturing *in vitro*. The project has laid solid foundations for further study.

UNIVERSITY OF TOKYO | SYSTEMS BIOLOGY | JULY 2011 – AUG 2011

Department of Biophysics and Biochemistry

Systems biology of cellular signalling: EGF-mediated Erk signalling pathways

- Supervised by Professor Shinya Kuroda

During this six week research internship, I performed a number of computational simulations and experiments to assess EGF-mediated Erk signalling *in vitro* in PC12 cells.