

Jane Sinclair

Personal Details

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Educational Qualifications and Academic Awards

- 02-2025 – Current** **Doctor of Medicine**
The University of Queensland
- 06-2021 – Current** **Doctor of Philosophy**
Field: Virology
The University of Queensland, School of Chemistry and Molecular Bioscience, Brisbane, Australia
Project: “Post-acute cardiovascular sequelae of SARS-CoV-2 infection and COVID-19 vaccines”
Provisional patent pending
- 01-2019 – 12-2020** **Bachelor of Science (Hons Class I)**
Major Microbiology
The University of Queensland, School of Chemistry and Molecular Bioscience, Brisbane, Australia
Project: “The influence of diabetes mellitus on cardiac complications from influenza virus and SARS-CoV-2 infection”
Received Deans Commendation for Academic Excellence in Semester 2 2020
- 01-2017 – 12-2019** **Bachelor of Biomedical Science**
The University of Queensland, Brisbane, Australia

Employment History

- 07-2024 – Current** **Assistant Research Technician**
School of Chemistry and Molecular Biosciences, The University of Queensland
- 02-2024 – 06-2024** **Casual Academic Staff – BIOL2200 & MICR3002 Practical tutor**
School of Chemistry and Molecular Biosciences, The University of Queensland
- 07-2023 – 11-2023** **Casual Academic Staff – BIOC3006 Practical tutor**
School of Chemistry and Molecular Biosciences, The University of Queensland
- 04-2022 – 05-2023,** **Casual Academic Staff – BIOL2202 Practical tutor**
School of Chemistry and Molecular Biosciences, The University of Queensland
- 02-2022 – 06-2022** **Casual Academic Staff – BIOL2000 Practical tutor**
School of Chemistry and Molecular Biosciences, The University of Queensland
- 04-2021 – 06-2021** **Assistant Research Technician**
School of Chemistry and Molecular Biosciences, The University of Queensland

Other Research Experience

- 08-2024 – Current** – **PC3 Supervision of Students and Researchers in Training (AIBN)**
The University of Queensland, Brisbane, Australia
- 01-2022 – 06-2023** – **PC3 Training for Unsupervised Entry (IMB, AIBN)**
The University of Queensland, Brisbane, Australia
- 02-2022 – 03-2022** – **Surveillance and Monitoring to Eliminate Lymphatic Filariasis from Samoa**
Fieldwork in Samoa through The University of Queensland, Brisbane, Australia
- 11-2019 – 01-2020** – **Unpaid Work Experience (SCMB)**
The University of Queensland, School of Chemistry and Molecular Biosciences, Brisbane, Australia
Dr. Kirsty Short
Assisted lab group members with research projects and experimental protocols. Gained experience in anti-viral and aseptic techniques, biological waste disposal, cell culture techniques, murine handling, dissection and processing of specimens.
- 02-2018 – 06-2018** – **Authentic Large-Scale Undergraduate Research Experience BIOC2000**
The University of Queensland, School of Chemistry and Molecular Bioscience, Brisbane, Australia
Grade: 5
An advance on the usual course practical stream, the ALURE stream explored the theory and practice of cloning, screening, protein production, and protein purification using bacterial expression systems, through work on uncharacterised proteins from insectivore venom with the aim of overproducing, purifying, and testing the toxicity of these venom proteins.

Research Publications and Conference Presentations

Sinclair, J.E., Vedelago, C., Ryan, F.J., Carney, M., Redd, M., Lynn, M.A., et al. (2024). Cardiovascular symptoms of PASC are associated with trace-level cytokines that affect the function of human pluripotent stem cell derived cardiomyocytes.

Under review: Nature Microbiology

Sinclair, J.E., Mayfield, H.J., Brown, S.J., Waller, M., Williams, O., Litt, J.C.B., Short, K.R., Lau, C.L. (2024). A Bayesian network model for estimating risk of long COVID.

Presented: 7th Southern Cross Travel & Tropical Medicine Conference 2023; 9th ESWI Influenza Conference 2023; Bayesian Network Modelling Association (BNMA) Conference 2023

Shukla, T., **Sinclair, J.E.**, Mayfield, H.J., Litt, J.C.B., Short, K.R., Lau, C.L., et al. (2024). A Bayesian network analysis of the risks vs benefits of Pfizer COVID-19 vaccine in children. **Under submission.**

Steele, L.E., Wu, M., Sinclair, J.E., Ignacio, K., Macauslane, K.L., McCallum, G., et al. (2024). Prior measles and the severity of 1918 influenza: a case-control study. **Under submission.**

Scott, J., Mayfield, H.J., **Sinclair, J.E.**, Martin, B.M., Howlett, M., Muttucumar, R., et al. (2024). Field laboratory comparison of STANDARD Q Filariasis Antigen Test (QFAT) with Bioline Filariasis Test Strip (FTS) for the detection of lymphatic filariasis in Samoa, 2023. *PLOS Neglected Tropical Diseases*.

Speck, P., Mackenzie, J., Bull, R.A., Slobedman, B., Drummer, H., Fraser, J., ..., **Sinclair, J.E.**, et al. (2023). Statement in support of: "Virology under the microscope – a call for rational discourse". *Journal*

of *Virology*, *mBio*, *mSphere*. doi: 10.1128/jvi.00451-23, 10.1128/mbio.00815-23, 10.1128/msphere.00165-23.

Sinclair, J.E., Mayfield, H.J., Short, K.R., Brown, S.J., Puranik, R., Mengersen, K., Litt, J.C.B., Lau, C.L. (2022). Quantifying the risks versus benefits of the Pfizer COVID-19 vaccine in Australia: a Bayesian network analysis. *medRxiv*. doi: 10.1101/2022.02.07.22270637.

Presented: 9th Australasian Vaccines & Immunotherapeutics Development Meeting 2022

Sinclair, J.E., Smith, C., Jacobson, K., Gras, S., Sato, K., Kulasinghe, A., Short, K.R. (2022). Chronic complications of influenza and COVID-19.

Presented: Immunisation Coalition Annual Scientific Meeting 2022

Sinclair, J.E., Tong, Z.W.M., Noye, E.C., Yih Chew, K., Trau, M., Wuethrich, A., Smith, C., Short, K.R. (2021). *IL-6, IL-8 and IFN- β are elevated in individuals with long COVID*.

Presented: ISIRV-WHO Virtual Conference 2021; 14th Australian Influenza Symposium 2021; The University of Queensland SCMB Research Student Symposium 2021; 60th ASMR National Scientific Conference 2021; 8th ESWI Influenza Conference Virtual Edition 2021; 2nd Australasian COVID-19 Conference 2022.

Sinclair, J.E., Bloxham, C.J., Chiu, H., Chew, K.Y., Russell, J., Yoshikawa, Y., et al. Type I diabetes mellitus increases the cardiovascular complications of influenza virus infection. (2021). *Frontiers in Cellular and Infection Microbiology*. doi: 10.3389/fcimb.2021.714440.

Presented: 7th European Scientific Working Group on Influenza (ESWI) Conference; The Australian Virology Society (AVS) Virtual Symposium; The University of Queensland SCMB Research Student Symposium 2020.

Sinclair, J.E., Zhu, Y., Xu, G., Ma, W., Shi, H., Ma, K.-L., et al. (2021). A meta-analysis on the role of pre-existing chronic disease in the cardiac complications of SARS-CoV-2 infection. *iScience*. doi: 10.1016/j.isci.2021.102264.

Wuethrich, A., **Sinclair, J.E.**, Henders, A.K., Li, J., Chew, K.Y., Vedelago, C., et al. (2023). Low-level inflammatory cytokines can be detected by nanotechnology in individuals with long COVID up to 20 months after SARS-CoV-2 infection. *Under consideration at Nature Microbiology*.

Presented: 11th Australasian Virology Society Meeting 2022.

Sato, K., **Sinclair, J.E.**, Sadeghirad, H., Fraser, J.F., Short, K.R., Kulasinghe, A. (2021). Cardiovascular disease in SARS-CoV-2 infection. *Clinical and Translational Immunology*. doi: 10.1002/cti2.1343.

Lau, C.L., Mayfield, H.J., **Sinclair, J.E.**, Brown, S.J., Waller, M., Enjeti, A.K., et al. (2021). Risk-benefit analysis of the AstraZeneca COVID-19 vaccine in Australia using a Bayesian network modelling framework. *Vaccine*. doi: 10.1016/j.vaccine.2021.10.079.

Mayfield, H.J., Lau, C.L., **Sinclair, J.E.**, Brown, S.J., Baird, A., Litt, J., et al. (2021). Designing an evidence-based Bayesian network for estimating the risk versus benefits of AstraZeneca COVID-19 vaccine. *medRxiv*. doi: 10.1101/2021.10.28.21265588.

Presented: 13th Annual Australasian Bayesian Network Modelling Society Conference 2021; AI4PAN at Women's College Extended Lunch Working Group Meeting Day, 8 December 2021; 24th International Congress on Modelling and Simulation 2021.

Zhu, Y., Bloxham, C.J., Hulme, K.D., **Sinclair, J.E.**, Tong, Z.W.M., Steele, L.E., et al. (2020). A meta-analysis on the role of children in SARS-CoV-2 in household transmission clusters. *Clinical Infectious Diseases*. doi: 10.1093/cid/ciaa1825.

Kulasinghe, A., Liu, N., Tan, C.W., Monkman, J., **Sinclair, J.E.**, Bhuva, D.D., et al. (2022). Transcriptomic profiling of cardiac tissues from SARS-CoV-2 patients identifies DNA damage. *medRxiv*. doi: 10.1101/2022.03.24.22272732.

Tong, Z.W.M., Karawita, A.C., Kern, C., Zhou, H., **Sinclair, J.E.**, Yan, L., et al. (2021). Primary chicken and duck endothelial cells display a differential response to infection with highly pathogenic avian influenza virus. *Genes*. doi: 10.3390/genes12060901.

Zhou, P., Chen, J., Zheng, T., Yunis, J., Makota, V., Alexandre, Y.O., ..., **Sinclair, J.E.**, et al. (2021). Low-dose IL-2 therapy invigorates CD8+ T cells for viral control in systemic lupus erythematosus with a potential risk of deteriorating immunopathology. *PLOS Pathogens*. doi: 10.1371/journal.ppat.1009858.

Public Engagement

Panel Discussions

UQ Student Association of Science Society's Vaccine Misinformation Science Communication Seminar – *Invited panelist*

Australasian Bayesian Network Modelling Society Webinar 27th April 2022 – *Invited panelist*

Public Health Contributions

CoRiCAL: COVID Risk Calculator (<https://corical.immunisationcoalition.org.au/>) – *Model development, data analysis, data visualization and communication, risk communication*

Peer Reviews

Emerging Infectious Diseases: 1 perspective article

Conference Attendance

OPTIONS XII for the Control of Influenza Congress 2024 – *Oral presentation*

7th Southern Cross Travel and Tropical Medicine Conference 2024 – *Oral presentation*

Communicable Diseases & Immunisation Conference 2024 – *Oral presentation*

Bayesian Network Modelling Association Conference 2023 – *Oral presentation*

9th ESWI Influenza Conference 2023 – *Oral presentation*

7th Southern Cross Travel & Tropical Medicine Conference 2023 – *Oral presentation*

Asia-Pacific Vaccine and Immunotherapy Congress 2023 – *Attendance*

11th Australasian Virology Society Meeting 2022 – *Oral presentation, poster presentation*

2nd Australasian COVID-19 Conference 2022 – *Presentation, poster-session guiding*

9th Australasian Vaccines and & Immunotherapeutics Development (AVID) Meeting 2022 – *Online presentation*

Immunisation Coalition Annual Scientific Meeting 2022 – *Online invited presentation*

8th European Scientific Working Group on Influenza (ESWI) Conference 2021 – *Online presentation*

AI4PAN at Women's College Extended Lunch Working Group Meeting Day 2021 – *Presentation*

24th International Congress on Modelling and Simulation (MODSIM) 2021 - *Online presentation*

MiM2021 – *Online attendance*

Queensland Immunology Networking Symposium 2021 – *Attendance*

60th ASMR National Scientific Conference 2021 – *Online short talk presentation*

UQ SCMB Research Student Symposium 2020 – *Poster presentation, double-blind poster presentation competition participation*

Nature Research Academies Getting Published: Effectively Communicating Your Research Workshop – *Online attendance*

Australasian Bayesian Network Modelling Society Conference 2021 – *Online presentation*

Australian Inflammation Symposium 2021 – *Online attendance*

14th Australian Influenza Symposium 2021 – *Online short talk presentation*

ISIRV-WHO Virtual Conference 2021 – *Online poster presentation*

Oz Single Cell Brisbane 2021 – *Online attendance*

10x Genomics Global Infectious Disease Symposium – *Online attendance*

Advancing Science: Virtual Immunology Conference – *Online attendance*

2021 Insights Immunology Virtual Summit – *Online attendance*

MicroSeq2021 – *Online attendance*
Brisbane Immunology Group 20th Annual Retreat – *Online attendance*
Genetics Society of AustralAsia Conference 2021 – *Online attendance*
60th Princess Alexandra Hospital (PAH) Health Symposium – *Online attendance*
Bioethics, the Law and Data-Sharing: AI in Radiology (BOLD-AIR) Summit 2021 – *Online attendance*
Artificial Intelligence in Medicine and Imaging (AIMI) Symposium 2021 – *Online attendance*
Australian Virology Society (AVS) Virtual Symposium 2020 – *Online poster presentation*
7th European Scientific Working Group on Influenza (ESWI) Conference 2020 – *Online poster presentation*
UQ SCMB Research Student Symposium 2020 – *Poster presentation*

Volunteering

Microneedles 2025 – *Volunteer*
Communicable Diseases & Immunisation Conference 2025 – *Abstract reviewer*
OPTIONS XII for the Control of Influenza Congress 2024 – *Volunteer*
7th Southern Cross Travel and Tropical Medicine Conference 2024 – *Volunteer*
Administer First Aid & CPR – *Qualified 2014–2028*
Wonder of Science – *Young Science Ambassador 2023–2024*
Pint of Science – *QLD Project Officer 2022; Brisbane Speaker Liaison 2022*
UQ Science Demo Troupe – *Member 2022*

Professional Affiliations and Memberships

Women in Technology
 Women in Medicine
 Women in Science
 Australasian Bayesian Network Modelling Society
 Australian Virology Society
 European Society of Cardiology
 Australian Society for Medical Research
 Modelling and Simulation Society of Australia and New Zealand

Scholarships, Research Grants and Relevant Awards

06-2024	Travel Grant For attendance and oral presentation at OPTIONS XII Congress 2024
11-2023	Award for Best Student Presentation For attendance and oral presentation at the BNMA Conference 2023
09-2023	ESWI Student Travel Grant For attendance and oral presentation at the 9 th ESWI Influenza Conference
07-2021 – 06-2025	Research Training Program Tuition Fee Offset For PhD duration
07-2021 – 06-2024	Research Training Program Stipend For PhD duration
11-2020	UQ Employability Grant For attendance and poster presentation at the 7 th ESWI Influenza Conference

Academic Referees

Dr. Kirsty Short

Research Fellow, The University of Queensland, School of Chemistry and Molecular Biosciences, Australia

PhD Supervisor, Honours Supervisor

Phone: +61 7 336 54226 Email: k.short@uq.edu.au

Dr. Meredith Redd

Research Officer, The University of Queensland, Institute for Molecular Bioscience, Australia

Honours Co-Supervisor

Phone: +61 7 334 62050 Email: m.redd@imb.uq.edu.au