

Experience

Bioinformatician

South Australian Genomics Centre (SAGC)

September 2020 - Present

Key Highlights

- Completed and delivered 8 custom bioinformatics analysis projects over the past 11 months. Feedback from clients included “timely completion”, “detailed documentation”, “transparent and reproducible”, and “well-presented”.
- Drove analysis of an 8-month-long 10X single-cell RNA-seq project investigating tissue development. The analysis resulted in successful integration of multiple datasets across different organs, deployment of an interactive web app, and characterisation of novel cell populations.

Publications

- Hin N**, Newman M, Pederson S, Lardelli M. (2020). Iron Responsive Element (IRE) mediated responses to iron dyshomeostasis in Alzheimer's disease. *bioRxiv*. doi: 10.1101/2020.05.01.071498. PREPRINT (accepted at *Journal of Alzheimer's Disease*).
- Hin N**, Newman M, Kaslin J, Douek AM, Lumsden A, Nik SHM, Dong Y, Zhou X-F, Mañucat-Tan NB, Ludington A, Adelson DL, Pederson S, Lardelli M. (2020). Accelerated brain aging towards transcriptional inversion in a zebrafish model of the K115fs mutation of human *PSEN2*. *PLOS ONE*. 15(1):e0227258. doi: 10.1371/journal.pone.0227258.
- Hin N**, Newman M, Pederson S, Lardelli M. (2019). Brain transcriptome analysis of a familial Alzheimer's disease-like mutation in the zebrafish *presenilin 1* gene implies effects on energy production. *Molecular Brain*. 12(1):43. doi: 10.1186/s13041-019-0467-y
- Dong Y, Newman M, Pederson SM, Barthelson K, **Hin N**, Lardelli M. (2021). Transcriptome analyses of 7-day-old zebrafish larvae possessing a familial Alzheimer's disease-like mutation in *psen1* indicate effects on oxidative phosphorylation, ECM and MCM functions, and iron homeostasis. *BMC Genomics*. 22(1):1-6.
- Breen J, McAninch D, Jankovic-Karasoulos T, McCullough D, Smith MD, Bogias KJ, Wan Q, Choudhry A, **Hin N**, Pederson S, Bianco-Miotto T, Roberts C. (2020). Temporal placental genome wide expression profiles reflect three phases of utero-placental blood flow during early to mid human gestation. *medRxiv*. doi: 10.1101/2020.06.25.20139709. PREPRINT.
- Newman M, Nik HM, Sutherland GT, **Hin N**, Kim WS, Halliday GM, Jayadev S, Smith C, Laird AS, Lucas CW, Kittipassorn T. (2020). Accelerated loss of hypoxia response in zebrafish with familial Alzheimer's disease-like mutation of presenilin 1. *Human Molecular Genetics*. 29(14):2379-94.

References

Dr. Jimmy Breen
Head of Bioinformatics
South Australian Genomics Centre
Phone: +61 8 8128 4308
Email: jimmy.breen@sahmri.com

Dr. Sen Wang
Manager
South Australian Genomics Centre
Phone: +61 881 284 152
Email: sen.wang@sahmri.com

Skills & Competencies

Technical Skills

Linux High Performance Computing R
Git / version control Reproducible Research
Pipeline Development R/Shiny web apps

Bioinformatics Analysis

RNA-seq 10X Single-cell RNA-seq
Microarrays LC-MS/MS Statistics
Omics data integration CRISPR screens

Education

Doctor of Philosophy (2017 – 2020)

The University of Adelaide, Australia

- Conferred December 2020
- Thesis Topic:** Transcriptome analysis of zebrafish genetic models to reveal early molecular drivers of Alzheimer's disease
- Winner of University Medal (top 4% of theses submitted in 2020)

Achievements

- 2021 – Mace Bearer of Graduation Ceremony**, The University of Adelaide, Adelaide, Australia.
- 2021 – Semi-Finalist in 7NEWS Young Achiever Awards**, 7NEWS, Adelaide, Australia.
- 2020 – University Doctoral Research Medal (top 4% of theses submitted in 2020)**, The University of Adelaide, Adelaide, Australia.
- 2020 – Dean's Commendation for Doctoral Thesis Excellence**, The University of Adelaide, Adelaide, Australia.
- 2019 – Oral Presentation Award (1st Place)**, out of 15 speakers, COMBINE 2019. Sydney, Australia.
- 2019 – Best Poster Award**, out of 35 entrants, AMSI BioInfoSummer. Sydney, Australia.
- 2019 – CHOOSEMaths Travel Grant Winner**, one of 20 winners selected nationally, Australian Mathematical Sciences Institute (AMSI). Sydney, Australia.
- 2019 – Best Student Presentation Award**, out of 50 speakers, Australia-Japan Joint Neurodegenerative Disease Symposium. Adelaide, Australia.
- 2017 – Oral Presentation Award (3rd Place)**, out of 15 speakers, COMBINE Symposium 2017. Adelaide, Australia.
- 2017 – Best Poster Award**, out of 36 entrants, Model Organisms in Human Health Australia (MOHHA). Yarra Valley, Victoria.