New Zealand RS&T Curriculum Vitae

PART 1

1a. Personal details				
Full name	*Title* Ms	*First name* Victoria	*Second name(s)* Jane	*Family name* King
Present position	PhD candidate			
Organisation/Employer	The University of Auckland			
Contact Address	Department of Physiology Faculty of Medical and Health Sciences			
	85 Park Road, Grafton			
	Auckland		**Post code**	1023
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Email	v.king@auckland.ac.nz			
ORCiD number	0000-0002-4327-5632			

1b. Academic qualifications

2018	Masters, Physiology (First Class Honours)	University of Auckland
2016	Postgraduate Diploma in Science, Physiology (Merit)	University of Auckland
2012	Bachelor of Science, Pharmacology and Physiology	University of Auckland

1c. Professional positions held

2022-present	Data Analyst, Paediatrics	University of Auckland
2019-present	PhD student, Dept of Physiology	University of Auckland
2017-present	Graduate Teaching Assistant	University of Auckland
2018-2019	Research Assistant, Dept of Physiology	University of Auckland
2018	Research Assistant, Paediatrics	University of Auckland
2015-2017	Research Assistant, Anaesthetics	University of Auckland

1d. Present research/professional speciality

I have undertaken my PhD studies in the Fetal Physiology and Neuroscience Research Group (co-directors Bennet L and Gunn AJ) and with the Department of Obstetrics and Gynaecology (Stone PR). My research interests are the physiology of the fetus and in particular the circadian and ultradian rhythms in fetal behaviour. I am also interested in the early detection of the fetus at risk of stillbirth. To this end, my work also encompasses the maternal experience of pregnancy, including maternal sleep, an oft-neglected circadian activity which may affect the fetus.

1e. Total years research experience	8 years

1f. Professional distinctions and memberships (including honours, prizes, scholarships, boards or governance roles, etc)

Prizes

2021 Velocity Innovation Challenge (social category) winners, 20th May 2021. This prize is awarded to promising proposals by the Centre for Innovation and Entrepreneurship.

2021 Diversity Scholar. RStudio::global, online, 21st January 2021. This prize is awarded to outstanding members of underrepresented groups at the annual RStudio conference.

2020 JD Sinclair award. This prize is awarded annually to a high-performing PhD candidate in Physiology.

2020 Prize: PhD presentation award. Australasian Chronobiology Society, online,

3rd November 2020. This prize is awarded to the best student oral communication.

2020 Prize: Research Excellence award. Australasian Chronobiology Society, online, 3rd November 2020. This prize is awarded to outstanding abstract submissions.

2019 Prize: Tania Gunn PhD presentation award. Fetal and Neonatal Physiological Society, Marysville, Australia, 16-19th October 2019. This prize is awarded to the best student oral communication.

2019 Prize: Best Junior Researcher Presentation, Fetal and Neonatal Workshop, Queensland, Australia, 15-16th March 2019. This prize is awarded to the best early PhD student oral communication.

2018 Prize: Junior Researcher Presentation, Fetal and Neonatal Workshop, Queenstown, New Zealand, 22-23rd March 2018. This prize is awarded to the runner-up early PhD student oral communication.

2017 Prize: Presentation award, Australasian Chronobiology Society, Waiheke, New Zealand, 23-24th October 2017. This prize is awarded to the best Honours/Masters student oral communication.

2017 Prize: Research excellence award, Australasian Chronobiology Society, Waiheke, New Zealand, 23-24th October 2017. This prize is awarded for outstanding student research.

2017 Prize: Wallath Prize (Biomedical), Summer Research Scholarship Programme, University of Auckland. This prize is awarded to the student with the top ranked research report in their category.

Grants and Scholarships

2019-present University of Auckland Doctoral Scholarship.

2016-2017 Scholarship award: Summer Research Scholarship Programme, University of Auckland.

2019 PGSA Travel Grant

2017 PGSA Travel Grant x2

Invited Talks and Public Outreach

2022 Invited talk: RLadies AKL, 13th April 2022: *From me to team*. I gave a talk about making the shift from coding on solo projects to coding as part of a larger team. This was presented online to the RLadies AKL branch of the RLadies Global network.

2020 Invited presentation: SatRdays, 22nd Februrary 2020: *I dream of gg(plot2): visualising sleep in pregnancy with R.* I was invited to give a lightning talk about large dataset visualisation to provide group insights and direction for data analysis. I presented this at the inaugural SatRdays Auckland 2020, a conference of and for users of the R statistical programming language, held by a local chapter of the R Consortium. The audience was comprised of members of academia and industry. My registration and meal was included.

2019 Invited workshop: Research Bazaar, 10-12th July 2019: *Introduction to R*. I was invited to produce and lead a half-day practical interactive workshop teaching R statistical programming. I led this workshop at Research Bazaar AKL 2019, a local chapter of the worldwide Research Bazaar group promoting digital literacy in modern research. Research Bazaar aims to connect researchers across disciplines and upskill digital scholarship practices. I gave both an overview of the capabilities of R and introduced the audience to a workflow they could implement themselves in real-time, to instil

confidence that they could independently adapt it to their own research needs afterwards. The audience was mainly academic, with a wide range of aptitudes.

2018-2019 Courses and Careers Open Day, University of Auckland. I was part of the Department of Physiology team who engaged with secondary school students and their parents about science course opportunities and undergraduate students to advise about post-graduate courses and career opportunities in science.

2017 Chairperson, HealtheX Postgraduate Student Conference. Faculty of Medical and Health Sciences, University of Auckland, New Zealand. 15th September 2017.

2015-2016 Meet-A-Scientist volunteer, LENScience, Liggins Institute, University of Auckland. The Meet-a-Scientist programme provided an opportunity for secondary school students from around the North Island of New Zealand to spend time in special research teaching laboratories in the Faculty of Medical and Health Sciences. Students spent time undertaking experiments and got meet with students and staff from a science/health background to learn about science and medical research as a career.

Society Memberships

2020-2022 Newborn Brain Society
2019 Fetal and Neonatal Physiological Society
2017-present Physiological Society of New Zealand
2017, 2020 Australasian Chronobiology Society
2020-present R-Ladies AKL

Theses and dissertations and research reports

2018 Masters thesis. The effects of inflammation on circadian rhythms in the preterm fetus. Submitted March 2018. Supervisor Bennet L, co-supervisor Gunn AJ. Department of Physiology, University of Auckland, New Zealand.

2017 Summer research scholarship. Effect of chronic inflammation on circadian rhythms in the preterm fetus. February 2017. Supervisor Bennet L. Department of Physiology, University of Auckland, New Zealand.

Teaching

2017-present *Graduate Teaching Assistant/Demonstrator*
Postgraduate MEDSCI 743, 738
Undergraduate MEDSCI 205, 206, 311, 317
MBChB 211
MAORIHTH 22H
PHARM 211

Practical assistance in wetlab and analysis work; grading of assignments and exams; creation of grading rubric.

1g. Total number of *peer reviewed* publications and patents	Journal articles	Books, book chapters, books edited	Conference proceedings	Patents
	6		13	

2a. Research publications and dissemination

Peer-reviewed journal articles

1. Dhillon SK, Gunn ER, Lear BA, **King VJ**, Lear CA, Wassink G, Davidson JO, Bennet L, Gunn AJ. Cerebral Oxygenation and Metabolism After Hypoxia-Ischemia. Front Pediatr. 10:925951. Doi: 10.3389/fped.2022.925951.
2. **King VJ**, Bennet L, Stone PR, Clark A, Gunn AJ, Dhillon SK. Fetal growth restriction and stillbirth: Biomarkers for identifying at risk fetuses. Front. Physiol. 13:959750. doi: 10.3389/fphys.2022.959750.
3. Magawa S, Lear CA, Beacom MJ, **King VJ**, Kasai M, Galinsky R, Ikeda T, Gunn AJ, Bennet L. Fetal heart rate variability is a biomarker of rapid but not progressive exacerbation of inflammation in preterm fetal sheep. Sci Rep. 2022 Feb 2;12(1):1771. doi: 10.1038/s41598-022-05799-3.
4. Lear CA, Davidson JO, Dhillon S, **King VJ**, Lear BA, Magawa S, Maeda Y, Ikeda T, Gunn AJ, Bennet L. The effects of antenatal dexamethasone and hyperglycemia on cardiovascular adaptation to asphyxia in preterm fetal sheep. Am J Physiol Regul Integr Comp Physiol. 2020; 319(6):R653-R665. doi: 10.1152/ajpregu.00216.2020.
5. Galinsky R, van de Looij Y, Mitchell N, Dean JM, Dhillon SK, Yamaguchi K, Lear CA, Wassink G, Davidson JO, Nott F, Zahra VA, Kelly SB, **King VJ**, Sizonenko SV, Bennet L, Gunn AJ. Magnetic resonance imaging correleates of white matter gliosis and injury in preterm fetal sheep exposed to progressive systemic inflammation. International Journal of Molecular Sciences, 2020 21(23) doi: 10.3390/ijms21238891.
6. Bennet L, Dhillon SK, Lear CA, van den Heuij L, **King V**, Dean JM, Wassink G, Davidson JO, Gunn AJ. Chronic inflammation and impaired development of the preterm brain. Journal of Reproductive Immunology, 2018 Feb 125:45-55 doi: 10.1016/j.jri.2017.11.003

Peer reviewed books, book chapters, books edited

none

Refereed conference proceedings

1. King, VJ, Dhillon, SK, Lear, BL, Beacom, M, Lear, CA, Stone PR, Gunn, AJ, Bennet, L. Do squishy sheep have altered sleep? Development of sleep states in a new model of fetal growth restriction. Oral presentation, Fetal & Neonatal Physiological Society 2022
2. King, VJ, Dhillon, SK, Lear, BL, Beacom, M, Lear, CA, Stone PR, Gunn, AJ, Bennet, L. Small and squishy: growth restriction in the chronically instrumented fetal sheep. Mary Bullivant finalist: Oral presentation, PSNZ Medsci 2022
3. King, VJ, Dhillon, SK, Lear, BL, Beacom, M, Lear, CA, Gunn, AJ, Bennet, L. Small and squishy: growth restriction in the chronically instrumented fetal sheep. Poster presentation (online), PSNZ Medsci 2021
4. King VJ, Dhillon SK, Galinsky R, Lear CA, Davidson JO, Gunn AJ, Bennet, L. Prolonged inflammation impairs development of normal neural circadian rhythms in the preterm fetal sheep. Poster presentation (online), Hershey 2021
5. King VJ, Dhillon SK, Galinsky R, Lear CA, Davidson JO, Gunn AJ, Bennet, L. Prolonged inflammation impairs development of normal neural circadian rhythms in the preterm fetal sheep. Oral presentation (online), Pediatric Academic Society, 2021
6. King VJ, Lear CA, Dhillon S, Gunn AJ, Bennet L. Investigating ultradian

periodicity in the preterm fetal sheep EEG. Oral presentation (online), Australasian Chronobiology Society, 2020

7. King VJ, Gunn AJ, Stone PR, Bennet L. Maternal sleep in late gestation pregnancy. Oral presentation (online), PSNZ Medsci 2020
8. King VJ, Lear CA, Lear BA, Dhillon SK, Davidson JO, Gunn AJ, Bennet L. The effect of asphyxia on the development of EEG ultradian rhythms from preterm to term in fetal sheep. Oral presentation, Fetal & Neonatal Physiological Society 2019
9. King VJ, Lear CA, Dhillon S, Gunn AJ, Bennet L. Investigating ultradian periodicity in the preterm fetal sheep EEG. Oral presentation, Fetal and Neonatal Workshop 2019
10. King VJ, Dhillon S, Lear CA, Galinsky R, Gunn AJ, Bennet L. Effect of chronic inflammation on the circadian development of fetal EEG activity in preterm fetal sheep. Mary Bullivant finalist: Oral presentation, PSNZ Medsci 2018
11. King VJ, Dhillon S, Lear CA, Galinsky R, Van den Heuij L, Gunn AJ, Bennet L. Effect of chronic inflammation on circadian rhythms in the preterm fetus. Oral presentation, Fetal and Neonatal Workshop 2018
12. King VJ, Dhillon S, Lear CA, Galinsky R, Van den Heuij L, Gunn AJ, Bennet L. Effect of chronic inflammation on circadian rhythms in the preterm fetus. Oral presentation, Australasian Chronobiology meeting 2017
13. King VJ, Dhillon S., Lear CA, Galinsky R, Van den Heuij L, Gunn AJ, Bennet L. Effect of chronic inflammation on circadian rhythms in the preterm fetus. Oral presentation, PSNZ Medsci 2017

Patents
none
Other forms of dissemination (reports for clients, technical reports, popular press, etc)
none