

# New Zealand RS&T Curriculum Vitae

## PART 1

1a. Personal details				
<b>Full name</b>	<i>Title</i>	<i>First name</i>	<i>Second name(s)</i>	<i>Family name</i>
	Ms	Victoria	Jane	King
<b>Present position</b>		PhD candidate		
<b>Organisation/Employer</b>		The University of Auckland		
<b>Contact Address</b>		Department of Physiology Faculty of Medical and Health Sciences 85 Park Road, Grafton Auckland		
			<b>Post code</b>	1023
<b>Work telephone</b>			<b>Mobile</b>	+64 274305999
<b>Email</b>		v.king@auckland.ac.nz		
<b>ORCID number</b>		0000-0002-4327-5632		

1b. Academic qualifications		
<b>2018</b>	Masters, Physiology (First Class Honours)	University of Auckland
<b>2016</b>	Postgraduate Diploma in Science, Physiology (Merit)	University of Auckland
<b>2012</b>	Bachelor of Science, Pharmacology and Physiology	University of Auckland

1c. Professional positions held		
<b>2022-present</b>	Data Analyst, Paediatrics	University of Auckland
<b>2019-present</b>	PhD student, Dept of Physiology	University of Auckland
<b>2017-present</b>	Graduate Teaching Assistant	University of Auckland
<b>2018-2019</b>	Research Assistant, Dept of Physiology	University of Auckland
<b>2018</b>	Research Assistant, Paediatrics	University of Auckland
<b>2015-2017</b>	Research Assistant, Anaesthetics	University of Auckland

1d. Present research/professional speciality
<p>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.</p>

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, 20<sup>th</sup> May 2021. This prize is awarded to promising proposals by the Centre for Innovation and Entrepreneurship.
- 2021** Diversity Scholar. RStudio::global, online, 21<sup>st</sup> 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,

- 3<sup>rd</sup> November 2020. This prize is awarded to the best student oral communication.
- 2020** Prize: Research Excellence award. Australasian Chronobiology Society, online, 3<sup>rd</sup> November 2020. This prize is awarded to outstanding abstract submissions.
- 2019** Prize: Tania Gunn PhD presentation award. Fetal and Neonatal Physiological Society, Marysville, Australia, 16-19<sup>th</sup> October 2019. This prize is awarded to the best student oral communication.
- 2019** Prize: Best Junior Researcher Presentation, Fetal and Neonatal Workshop, Queensland, Australia, 15-16<sup>th</sup> 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, 22-23<sup>rd</sup> 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, 23-24<sup>th</sup> 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, 23-24<sup>th</sup> 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, 13<sup>th</sup> 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, 22<sup>nd</sup> February 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, 10-12<sup>th</sup> 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-** Courses and Careers Open Day, University of Auckland. I was part of the  
**2019** 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, HealthX Postgraduate Student Conference. Faculty of Medical and Health Sciences, University of Auckland, New Zealand. 15<sup>th</sup> September 2017.
- 2015-** Meet-A-Scientist volunteer, LENScience, Liggins Institute, University of  
**2016** 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  
 MAORIRTH 22H  
 PHARM 211

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

1g. Total number of <i>peer reviewed</i> 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 correlates 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 Heuvel 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, BA, Beacom, M, Lear, CA, Stone PR, Gunn, AJ, Bennet, L. Fetal growth restriction and fetal sexes: brain vs brawn? Oral presentation, Fetal and Neonatal Workshop 2023
2. King, VJ, Dhillon, SK, Lear, BA, 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
3. King, VJ, Dhillon, SK, Lear, BA, 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
4. King, VJ, Dhillon, SK, Lear, BA, 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
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. Poster presentation (online), Hershey 2021
6. King VJ, Dhillon SK, Galinsky R, Lear CA, Davidson JO, Gunn AJ, Bennet, L. Prolonged inflammation impairs development of normal neural circadian

<p>rhythms in the preterm fetal sheep. Oral presentation (online), Pediatric Academic Society, 2021</p> <p>7. 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</p> <p>8. King VJ, Gunn AJ, Stone PR, Bennet L. Maternal sleep in late gestation pregnancy. Oral presentation (online), PSNZ Medsci 2020</p> <p>9. 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 &amp; Neonatal Physiological Society 2019</p> <p>10. 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</p> <p>11. 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</p> <p>12. King VJ, Dhillon S, Lear CA, Galinsky R, Van den Heuvel L, Gunn AJ, Bennet L. Effect of chronic inflammation on circadian rhythms in the preterm fetus. Oral presentation, Fetal and Neonatal Workshop 2018</p> <p>13. King VJ, Dhillon S, Lear CA, Galinsky R, Van den Heuvel L, Gunn AJ, Bennet L. Effect of chronic inflammation on circadian rhythms in the preterm fetus. Oral presentation, Australasian Chronobiology meeting 2017</p> <p>14. King VJ, Dhillon S., Lear CA, Galinsky R, Van den Heuvel L, Gunn AJ, Bennet L. Effect of chronic inflammation on circadian rhythms in the preterm fetus. Oral presentation, PSNZ Medsci 2017</p>
Patents
none
Other forms of dissemination (reports for clients, technical reports, popular press, etc)
<p>1. King VJ. <i>From me to team: learning to code collaboratively</i>. Oral presentation, R-Ladies AKL hui, 2022</p> <p>2. King, VJ. <i>I dream of gg(plot2)</i>. Oral presentation, SatRdays AKL 2020</p>