



UNIVERSITY OF
AUCKLAND
Waipapa Taumata Rau
NEW ZEALAND

MEDICAL AND
HEALTH SCIENCES



FACULTY OF MEDICAL AND HEALTH SCIENCES
POSTDOCTORAL
SOCIETY

SUMMIT2023

FMHS Postdoctoral Research Forum



Message from the Chairs

On behalf of the SUMMIT2023 Team, the Faculty of Medical and Health Sciences' Postdoctoral Society, the Liggins Institute Postdoctoral Forum, and the Auckland Bioengineering Institute Early Career Researchers, we welcome you to the 6th annual SUMMIT symposium.

The annual SUMMIT symposium was initially conceived as a platform for Research Fellows and Senior Research Fellows in the fields of medical and health sciences to connect, network, and foster fruitful collaborations. Embodying this spirit, we are thrilled to present the SUMMIT2023 Postdoctoral Research Forum, a collaborative effort among a transdisciplinary group spanning FMHS, Liggins, and ABI. These innovative partnerships play a vital role in advancing scientific research. We encourage you to take a moment to explore, appreciate, and engage with the wealth of expertise present here today.

Today's programme includes a wide range of talks from various Schools, Departments, and Institutes, covering topics such as epidemiology, clinical studies, basic biology, and mathematical modelling. Additionally, our inspiring invited speakers will talk about their personal journey to becoming a leader in their field.

We express our heartfelt gratitude to our generous sponsors who have provided invaluable support by offering highly valuable award categories and catering for our networking sessions. Your unwavering support for our emerging researchers is much appreciated, and it is your involvement that has made SUMMIT2023 possible. We hope that you enjoy your day.

Pratik Thakkar & Nike Franke
Chairs of SUMMIT2023

SUMMIT 2023 Organising Committee

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Nike Franke
Pratik Thakkar

Sponsorship and Judging Coordinators

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Nike Franke

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Catering and Logistics

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Institutional Support

Faculty of Medical and Health Sciences
Auckland Bioengineering Institute
Liggins Institute

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Auckland Medical Research Foundation (AMRF)
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6th July 2023

Grafton Campus, University of Auckland

Presentations are in 505-007. **Exhibitors' area**, lunch, afternoon tea, post-event drinks, and prize-giving are in the atrium outside building 504 (in back of the atrium).

SUMMIT 2023 Programme

Session One 9:00 am- 12:00 pm (505-007)

Chairs: Farha Ramzan & Joe Ashby

- 9:00am Karakia by Haunui Royal
- 9:05am Introductions and Housekeeping by SUMMIT Co-Presidents Dr. Pratik Thakkar and Dr. Nike Franke
- 9:15am Welcome by FMHS-PDS President Dr. Anassuya Ramachandran
- 9:20am **Invited Speaker:** A/Prof Matire Harwood (45-minute presentation, 35 min talk + 10 min for questions)
- 10:10am Research Presentations Session I (10 x 10-Minute Talks)

Lunch 12:00 pm- 1:00 pm

Session Two 1:00 pm- 3:45 pm (505-007)

Chairs: Shaleka Agrawal & Fa'asisila Savila

- 12:55pm Welcome Back
- 1:00pm **Invited Speaker:** A/Prof Jo James (45-minute presentation, 35 min talk + 10 min for questions)
- 1:50pm Research Presentations Session II (10 x 10-Minute Talks)

Afternoon Tea 3:45 pm- 04:15 pm

Session Three 4:15 pm- 5:25 pm (505-007)

Chairs: Sophie Farrow & Luling Lin

- 4:10pm Welcome Back
- 4:15pm Elevator Pitch Competition (17 x 3-Minute Talks)
- 5:25pm Karakia and waiata by Haunui Royal
- 5:30pm – 7:00pm **Networking and Prizegiving Ceremony** (in back of the atrium, outside AMRF Lecture Theatre)



Research Presentations

Awards for the oral research presentations are sponsored by the Auckland Medical Research Foundation (AMRF), Decode Science, and Capsugel (Lonza)

Session One 10:10 am - 12:00 pm (505-007)

9:05am	Karakia
9:20am	Invited Speaker: A/Prof Matire Harwood
10:10am	First round of 10-minute oral presentations
12:00pm – 1:00pm	Lunch

Session 1a: 10:10am – 11:05am

1. **Simerdeep Dhillon** (Physiology)
The neural and cardiovascular effects of exposure of gram-positive bacterial inflammation in preterm fetal sheep
2. **Akshata Anchan** (Molecular Medicine and Pathology)
Melanoma cells produce cell-like suspension particles that drastically disrupt the blood-brain barrier endothelium
3. **Amy Garrett** (Auckland Bioengineering Institute)
In vivo measurement of uterine smooth muscle electrophysiology in non-pregnant rats
4. **Brooke Wilson** (Liggins Institute)
Long-term therapeutic potential of fecal microbiome transfer in adolescent obesity: Insights from a 4-year follow-up study
5. **Nicholas Knowlton** (Obstetrics and Gynaecology)
Improving In-Vitro Fertilization (IVF) Feature Selection through Artificial Intelligence

Session 1b: 11:05am – 12:00pm

6. **Sandra Fitzgerald** (Molecular Medicine and Pathology)
Can exposure to smoking really be determined with a single PCR reaction?
7. **Eryn Kwon** (Anatomy and Medical Imaging)
Novel subject-specific method of visualising group differences from multiple DTI metrics without averaging
8. **Mridula Pachen** (Physiology)
Calming the storm: P2X3 receptor antagonism decreases blood pressure in hypertension
9. **William Schierding** (Ophthalmology)
Looking through the window into neuroinflammation: Building predictive models of glaucoma to better understand neuroinflammation
10. **Rachel Murdoch** (Medicine)
Impact of television depictions of gout on perceptions of illness: A randomized controlled trial



Session Two 1:00 pm- 3:45 pm (505-007)

- 12:55pm Welcome Back
1:00pm Invited Speaker: **A/Prof Jo James**
1:50pm Second round of 10-minute oral presentations
3:45pm – 4:15pm Afternoon tea

Session 2a: 1:50pm – 2:45pm

11. **Harry Jordan** (Medicine)
Accuracy and reliability of remote categorisation of upper limb outcome after stroke
12. **Sophie Farrow** (Liggins Institute)
Breaking free from GWAS shackles: Uncovering regulatory drivers in Parkinson's disease risk loci
13. **Christina Straub** (Molecular Medicine and Pathology)
Moo-ving towards safety: Investigating zoonotic transmission pathways on dairy farms for improved public health
14. **Chiara Gasteiger** (Medicine)
Healthcare providers' experiences of a mandatory nationwide transition to an adalimumab biosimilar
15. **Derek Orbaugh Antillon** (Auckland Bioengineering Institute)
Increasing scuba diver safety using a smart wetsuit

Session 2b: 2:45pm -3:45pm

16. **Theo Portlock** (Liggins Institute)
Linking the gut microbiome to cognitive development in Bangladeshi malnourished infants
17. **Emma Marks** (Population Health)
DNA methylaton mediates the association between early life adversity and childhood depression
18. **Sandy Lau** (Obstetrics and Gynaecology)
Placental extracellular vesicles provide transient protection against cardiovascular disease development in rodents
19. **Tonja Emans** (Physiology)
Photoacoustic imaging of the brain in a preclinical model of stroke: An 'open-minded' approach
20. **Daniel Ho** (Liggins Institute)
Identification of critical factors influencing executive function outcomes



Elevator Pitch Competition

Session Three 4:15 pm- 5:30 pm (505-007)

Awards for the following elevator pitches are sponsored by MediRay NZ, Auckland Bioengineering Institute, Liggins Institute, and NEB New Zealand

4:10pm	Welcome Back
4:15pm	Elevator pitches: 3 min talks
5:25pm	Karakia & waiata
5.30pm – 7.00pm	Networking and Prizegiving Ceremony

1. **Shaleka Agrawal** (Auckland Bioengineering Institute)
Unravelling the mechanisms underlying the elevated risk of atrial fibrillation in metabolic syndrome: A tissue-level study
2. **Xin Shen** (Physiology)
Revealing heterogeneity within carotid body glomus cells
3. **Gergely Toldi** (Liggins Institute)
Regulatory T cells in the newborn: Can we exploit their function?
4. **Ally Jung Un Choi** (Molecular Medicine and Pathology)
3D synthetic extracellular matrix for studying megakaryocytic differentiation and platelet production
5. **Aleksandra Milosavljevic** (Pharmacy)
An exploration into the routine collection of data on traditional, complementary, and alternative medicine exposures in large electronic health datasets: A scoping review
6. **Mohammad Norouzfard** (Auckland Bioengineering Institute)
Detection of OKN in eye tracking data using a 1D-CNN network
7. **Teena Gamage** (Obstetrics and Gynaecology)
Plasma extracellular vesicles as potential biomarkers of preterm brain injury
8. **Siobhan Tu'akoi** (Population Health)
Pacific communities co-designing and leading interventions to prevent rheumatic fever
9. **Chris Pook** (Liggins Institute)
Effects of fortification on the stability of preterm breastmilk
10. **Marie Jardine** (Te Kupenga Hauora Māori)
An alternative usage of 'aspiration' in swallowing research: Aspiring for responsiveness to Māori
11. **Anastasiia Artuyants** (Molecular Medicine and Pathology)
Cracking the cancer code: Can a single bacterium spill the beans



12. **Audrys Pauza** (Physiology)

Sweet stretch: Role of mechanosensitive ion channels in arterial glucose sensing by peripheral chemoreceptors

13. **Rebecca Evans** (Population Health)

Music and development in multiple domains for young children in Aotearoa New Zealand

14. **Farha Ramzan** (Liggins Institute)

Milk talks

15. **Shalinda Fernando** (Molecular Medicine and Pathology)

Development of next generation KIT inhibitors for the treatment of gastrointestinal stromal tumours (GIST)

16. **Haruna Suzuki-Kerr** (Physiology)

Round window as the target to understand vascular changes in the cochlea?

17. **Polona Le Quesne Stabej** (Molecular Medicine and Pathology)

Biallelic ATP2B1 variants as a likely cause of a novel neurodevelopmental malformation syndrome with hypocalcemia

Tūtira mai ngā iwi

Tūtira mai ngā iwi	Line up together, people
Tātou tātou e	All of us, all of us
Tūtira mai ngā iwi	Stand in rows, people
Tātou tātou e	All of us, all of us
Whaia te maramatanga	Seek after knowledge
Me te aroha	And love of others
E ngā iwi	Everybody
Kia ko tapa tahi	Think as one
Kia kotahi rā	Act as one
Tātou tātou e	All of us, all of us
Tātou tātou e	All of us, all of us
(repeat)	
Tātou tātou e E!!	
Hi aue hei !!!	

Invited Speakers



A/Professor Matire Harwood

Ngāpuhi (Indigenous tribe in North
Aotearoa New Zealand)

Matire (MBChB, PhD) is a Māori health academic at the School of Population Health University of Auckland, where she is Head of Department, teaches and undertakes research; and a General Practitioner/Family Physician at a Māori-led health clinic in South Auckland.

She has served on several national Boards and Advisory Committees including Waitemata District Health Board, Health Research Council, COVID-19 Technical Advisory Group at the Ministry of Health and is a member of the Hauora Māori Advisory Committee to the Minister of Health, tasked with

overseeing the implementation of the new Māori Health Authority, Te Aka Whai Ora.

Matire has received numerous awards for her work including the 2017 L'Oréal UNESCO New Zealand 'For Women In Science Fellowship' for research in Indigenous health, the Health Research Council's Te Tohu Rapuora 2019 award for leadership in research to improve Māori health and the Royal New Zealand College of General Practitioners Community Service Medal in 2022.



A/Professor Jo James



Associate Professor Jo James is a placental biologist based in the Department of Obstetrics and Gynaecology at the University of Auckland, and an honorary academic at the Auckland Bioengineering Institute. Her core research interest is how the placenta develops to nourish the baby, and why this is impaired when babies are born dangerously small.

She has never been told to stick in one lane (or she didn't listen when she was told), and so her team has fun combining a wide range of approaches including molecular biology, functional in vitro cell and tissue level experiments, in vivo and ex vivo

imaging, and computational modelling, to better understand why fetal growth restriction occurs, and improve our ability to predict, detect, and treat this disorder. This work has attracted ~\$6 million in funding including 3 fellowships and grants from the Marsden Fund, Health Research Council, Wellcome Leap and the Auckland Medical Research Foundation.

She sits on the Executive Committee of the International Federation of Placenta Associations, is an Associate Editor of Human Reproduction Update, and an assessing panel member for the Rutherford Discovery Fellowships.



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Our Purpose

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WHO ARE WE

Founded in 2018, Decode Science is an Australian and New Zealand Distributor, partnering with the world's most innovative Genomics and Molecular Biology brands.

With a thorough understanding of our customers needs Decode Science strives to be the supplier of choice by matching the world's best products with exceptional local support.

WHAT DO WE DO

Decode Science enables scientists to publish faster in higher impact journals and commercialise with confidence by providing them with world leading products and best in class support.

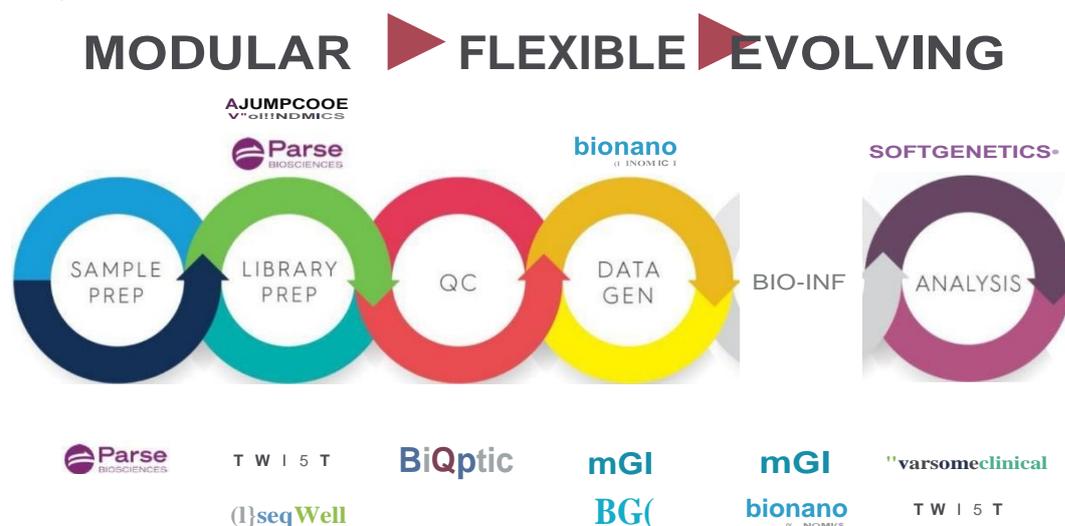
Decode Science provides Australian customers with high-quality, leading-edge technology matched with technical sales and applications support.

WHY CHOOSE LJS

With a focus on Genomics and Molecular Biology, Decode Science seeks to bring innovation and options to our customers.

Everyone at Decode Science is dedicated to helping the Clinicians, Researchers and Scientists of ANZ achieve greater success.

Our Ecosystem





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MEDICAL AND HEALTH SCIENCES

Faculty of Medical and Health Sciences Postdoctoral Society

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Keep in touch!

Our society promotes the interests of Postdoctoral researchers in the Faculty of Medical and Health Sciences, by creating opportunities for networking, collaboration, and professional development.

We aim to provide a voice for FMHS early- and mid-career researchers, and facilitate your work within the FMHS and wider University.

All FMHS Postdocs are welcome to attend Committee meetings, and actively contribute to the running of the society.

For more information, please visit:
<https://fmhspds.blogs.auckland.ac.nz/>

Upcoming Events...

- Monthly coffee- 10:30 at Superfino Café
Monday, 10th July 2023
- PDS Monthly meeting- Rm 503-019
Thursday, 20th July 2023

