October 2024 | Issue 1

News

Snow Medical

Vale Terry Snow AM

In this issue

On 4 August 2024, our founder Terry Snow passed away aged 80, leaving behind his tight-knit family and a remarkable legacy of business success and philanthropic generosity.

Investing in people and excellence is at the heart of all business and philanthropic investments of the Snow Family. Snow Medical funds long-term transformational science that is higher risk than traditional funding schemes, focused on developing outstanding young scientists and building teams. For example, the flagship Snow Fellowship scheme has invested over $100 million in 13 Snow Fellows and their teams at world-class institutions across Australia. In addition, another $100 million over 10 years have been invested to establish the Snow Centre for Immune Health in partnership with The Walter and Eliza Hall Institute, which will employ over 50 scientists, clinicians and staff.

Following Terry's passing, our Snow Fellows have reflected on the enormous impact that Terry, his family, and the Snow Medical Research Foundation have had on their lives and careers.

"Those who don't know Terry know him for the structures he built, but those who do know Terry know him for the people he built."

Tom Snow,
Chair Snow Medical Research Foundation

"I am so thankful to have met Terry twice at the Snow Medical Fellow conferences over the last two years. I often find myself reflecting on and repeating some of Terry's wisdom and thoughts he shared with us at these meetings to my team and wider connections. My professional journey is forever changed by being part of the Snow Medical group, and this legacy of Terry's will have wide reaching and ongoing impacts. Personally, I feel so privileged to have met Terry, who was such an inspirational leader. Terry has touched many, and in time I hope that the brightness of his legacy provides some comfort for you in his passing. I hold you all in my thoughts at this time."

Michelle Boyle, 2023 Snow Fellow, Burnett Institute, VIC

"The vision of Terry Snow and family has provided my lab with a once in a lifetime opportunity. Their support has enabled us to journey into a bold, innovative and un-precedented area of research. While other funding bodies may have similar approaches internationally, this one is unique. Not only were we given the resources and opportunity to pursue the science, there is more personal element to the Snow Fellowship program. Terry and the family have provided genuine personal and professional mentorship for our future success. This personal touch has been transformational. The first time I met Terry I was intrigued as to the reasons behind the Snow Medical program in contrast to the many other areas he could have devoted his time and money. His response was that biomedical research is one of the core pillars for health and wellbeing and economic prosperity for future Australia. His core messages were simple, but were obviously very effective – do it with high quality ("get the good screws for the fence, not the cheap ones"), focus on the important key task at hand and just get it done. Something institutions could all heed when approaching biomedical research."

James Hudson, 2020 Snow Fellow, Queensland Institute of Medical Research, QLD

"Terry always had such a bold vision and an inspiring commitment to excellence; I feel fortunate to have met him. His legacy will live on in the many people he enabled to be bold, innovative, and fearless in the face of adversity. He will be sorely missed."

Gavin Knott, 2022 Snow Fellow, Melbourne University, VIC

"Terry was a remarkable man who positively impacted the lives of so many and I feel privileged to have had the opportunity to know him. His vision, kindness, commitment to excellence and dedication to helping others were truly inspiring. In Canberra I feel the impact of all that Terry, Ginette and your whole family have accomplished and the benefit that this has brought to the city and broader communities. I have wonderful memories of conversations with Terry at Willinga Park, hearing how he started and built up his business and gaining insight into the passion, dedication, acumen, and willingness to seize opportunities and take risks that led to his incredible success. But beyond that, what was even more remarkable about Terry was his commitment to giving back and the extraordinary influence and impact that he had, and will continue to have, for years to come. Terry's legacy is immense and impact enduring. Thanks to the bold vision and hard work of Terry, Ginette, Tom and the whole family and team, Snow Medical has already transformed the research landscape in Australia. All within only a few years, and I am excited to see what the future holds. I feel proud to be a Snow Fellow and Terry's legacy inspires me to strive to make the most of every opportunity, be relentless in the pursuit of excellence and contribute to realising his long-term vision. Terry has set a high bar, and that will continue to inspire all those who follow him. He will be greatly missed."

Marian Burr, 2020 Snow Fellow, JCSMR (John Curtain School of Medical Research), ACT

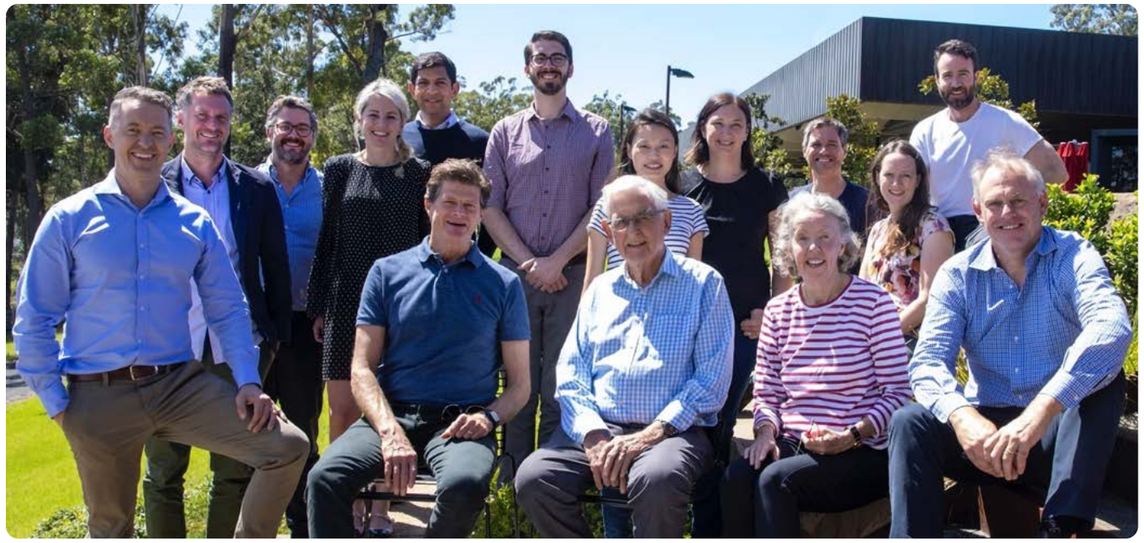
"I am deeply saddened to hear about Terry's passing. I am so grateful to have had the opportunity to meet him in person and to hear his inspiring stories about brave leadership, overcoming adversity, and staying true to oneself and one's beliefs. Terry's words and actions, especially his generosity, have left a lasting impression on my team and the science we do.

His legacy will live on in all aspects of Australian society that he touched and will continue to shape biomedical research in this country forever."

Stephin Vervoort, 2022 Snow Fellow, WEHI (Walter and Eliza Hall Institute of Medical Research), VIC

"Meeting Terry was a real highlight of my first Snow Fellow retreat this year at Willinga Park. Amidst the backdrop of the beautiful Grand Prix area, I remember being struck by Terry's warmth and welcoming nature. In joining the group of fellows, I really felt as though I was being welcomed into a family. The sincerity of Terry's support was reflected in his keen interest not just in my research goals but also a deeper curiosity about my personal background and experiences. He's been so influential as a catalyst for meaningful change in the medical research community, and I feel incredibly fortunate to be a part of the wonderful work he has set in motion. It is not an overstatement that the support of the Snow Medical Foundation has truly changed the trajectory of my career, and as I reflect on my goals for the future, Terry's journey and career stand out as truly inspirational. To me, his life really defined the meaning of success. It's clear that he worked exceptionally hard and upheld the highest standards of excellence in all his pursuits. And alongside his many accomplishments, he exemplified a beautiful spirit of kindness and generosity. He will be warmly remembered by the many whose lives he has touched, and I hope that I can honour Terry's legacy by upholding the same standard of excellence, compassion and generosity in my own life."

Lara Malins, 2024 Snow Fellow, ANU (Australian National University), ACT



"We are deeply saddened by the passing of Terry. He was a true visionary and an extraordinary entrepreneur, whose innovative spirit and generous heart have profoundly impacted those of us who have had the privilege to meet him. Terry's dedication to his family, his life's work, and the broader community, along with his remarkable achievements, have deeply resonated and inspired us all. He exemplified the power of combining philanthropy with entrepreneurial vision, creating a legacy that will benefit our work and our community for generations to come. His messages of tenacity, integrity, and striving for excellence represent our team's mantra and will remain so.

Please accept our heartfelt condolences during this difficult time. May you find comfort in the wonderful memories and enduring legacy of Terry, which lives on through you all and I hope us at least in some small part. He will be deeply missed, but his contributions and remarkable spirit will never be forgotten."

Marina Pajic, 2021 Snow Fellow, Garvan Institute of Medical Research, NSW

"Terry's generous support has been instrumental in my career, and his inspiring vision for a better Australia continues to guide me. My conversations with Terry always left me motivated, and his legacy of kindness and commitment to making a difference has left an indelible mark on my life and the lives of many others. My thoughts are with you during this difficult time."

Shom Goel, 2021 Snow Fellow, Peter MacCallum Cancer Centre, University of Melbourne, VIC

"Terry has left the world a better place - through business, through philanthropy, and through his beautiful family too. You must be extra-ordinarily proud. He inspires us all, and we're proud to help continue his incredible legacy."

Owen Siggs, 2020 Snow Fellow, Garvan Institute for Medical Research, NSW

"I was shocked to hear about Terry's passing as I still remember how he tapped my shoulder only about four months ago during the Snow Medical conference at Willinga Park. I am deeply saddened to hear of his loss and extend my heartfelt condolences to the entire Snow family, especially Tom and Ginette.

Terry's vision and extraordinary generosity in establishing Snow Medical and the Snow Fellowships have been truly transformative for Australian medical research and our biomedical engineering field. His commitment to excellence and his belief in supporting innovative science will continue to inspire us all.

I feel incredibly privileged to be a Snow Fellow and to have been part of Terry's remarkable vision. His enthusiasm for our work was always motivating, and I am more committed than ever to honouring his legacy through my research at the school of biomedical engineering. Please convey my deepest sympathies to Tom and the rest of the Snow family. Terry's impact on the scientific community and beyond will be remembered and cherished for generations to come."

Arnold Ju, 2023 Snow Fellow, Sydney University, NSW

"Terry's vision and leadership in establishing Snow Medical have had a profound impact on countless lives, including my own. His ambition and commitment to advancing medical research and supporting scientists have created a lasting legacy that will continue to benefit society for generations to come. As a researcher supported by Snow Medical, I am incredibly grateful for Terry's dedication to fostering innovation and progress. His belief in the power of Australian research to improve lives has been truly inspiring, and his loss will be deeply felt throughout the Australian scientific community. His passion and vision for supporting breakthrough research and nurturing the next generation of biomedical innovators in Australia set a remarkable example for us all. Of all the leadership sessions that Snow Medical has generously sponsored, the best example of leadership has been witnessing Terry's interactions with others. His actions spoke louder than any lecture, embodying the essence of genuine leadership. While words cannot adequately express the magnitude of this loss, there may be comfort in knowing how deeply appreciated Terry was and how his generosity and legacy will continue to inspire and drive forward scientific advancements.

Terry's memory will forever be honoured in our work and the achievements that his vision is making possible. We honour his memory in the pursuit of excellence in the science that we do."

Emily Wong, 2022 Snow Fellow, Victor Chang Cardiac Research Institute, NSW

"Terry was the kind of larger-than-life individual, yet nothing I have known about him was anything excentric. He had a remarkable ability to command honesty from people he interacted with in the way that makes any conversation memorable. I have only known Terry recently, yet his passion and resilience had started impacting my life way before our paths crossed. The best example of his impact in my life has been the Snow Medical Research Fellowship, which has and will continue to transform both my scientific and personal journey (and that of all my team members) in the years to come. Terry's legacy will certainly survive and continue to inspire many of us to strive for nothing but excellence and kindness. Merci, Terry!"

Loic Yengo, 2024 Snow Fellow, Institute for Molecular Bioscience, QLD

"Terry was an incredible man and has had a strong positive impact on how I approach the leadership and vision of my research program. I am so grateful for having had the opportunity to learn how he built and grew not just businesses but also people. His no-nonsense approach to challenges was really refreshing: just "get things done", and not let others or situations stop you from achieving your vision. When caught up in the details of complex problems, Terry taught me to keep my head above the clouds to pursue my vision with clarity.

Tenacity and excellence are two words that come to mind when remembering Terry. He did not just live and breathe those values, he inspired and passed them on to those around him: his family, business partners, and also the Snow Medical Fellows and their teams. I will forever be grateful for his generosity and vision in Snow Medical. I cannot overstate the impact this has had on me, all the members of my team and Australian biomedical research more broadly. The legacy Terry has left is simply incredible. My research team wished to pass on not only their own condolences, but also their strong memories of Terry and how he's inspired them in their own career journeys. Terry will certainly be missed by so many people, but his memory, values and generosity will live on."

Mel Eckersley-Maslin, 2021 Snow Fellow, Peter MacCallum Cancer Centre, VIC

Meet the Snow Fellows

Introducing Our 2024 Fellows

Loïc Yengo

Loïc Yengo is a statistical geneticist, a scientist who applies statistical methods to analyse and interpret large genetic datasets. Although all humans share 99.9% of the same DNA, it is the 0.1% difference that accounts not only for our diverse appearances and traits, but also for our vulnerability to diseases and our response to treatments. Loïc and his team are studying the largest and most diverse collections of genetic data in the world to unveil the causal role of genes in disease development. The discoveries from this project will pave the way for innovative approaches in personalised disease prevention and healthcare. Importantly, this work will lead to a 10-fold increase in the representation of people with non-European ancestries in genetic health data around the world.

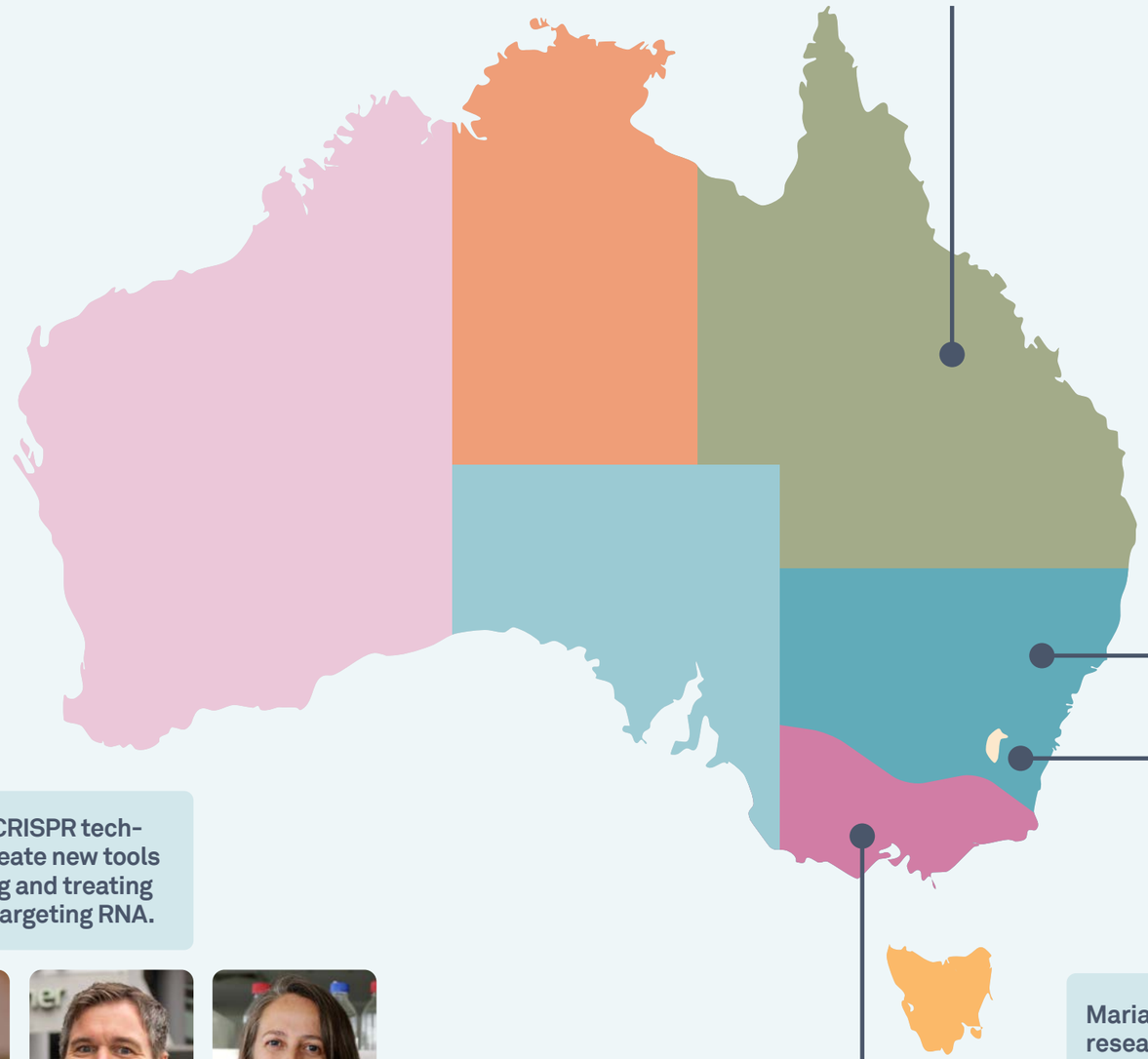
Lara Malins

Lara Malins is a medicinal chemist, which involves researching and creating new chemical compounds that can be used as drugs and therapies. She focuses on fine-tuning the biologically active compounds that nature has produced over billions of years of evolution and redeploying them as powerful new therapies for human afflictions. Using powerful new peptide synthesis technology, Lara will develop novel types of antibiotics, new anti-malaria drugs and new diagnostic agents that can help visualise and diagnose cancer.

Loïc Yengo (2024)
University of Queensland

James Hudson (2019)
Queensland Institute of Medical Research

James and his team are growing mini hearts in a dish! These human cardiac organoids mimic real heart tissue, offering a fantastic model for heart research.



Marina's goal is to design novel, tailored treatment options for pancreatic cancer. Marina and her team study how cancer cells spread and become resistant to chemotherapy.

Marina Pajic (2020)
Garvan Institute

Owen Siggs (2019)
Garvan Institute

Emily Wong (2021)
Victor Chang Cardiac Research Institute

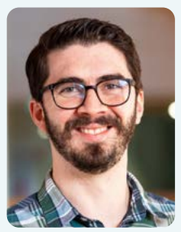
Arnold Ju (2023)
University of Sydney

Gavin uses CRISPR technology to create new tools for detecting and treating disease by targeting RNA.

Mel studies how cancer cells use tricks from early development to grow and survive, in order to find new ways to treat cancer.

Melanie Eckersley-Maslin (2020)
Peter MacCallum Cancer Centre

Shom Goel (2020)
Peter MacCallum Cancer Centre

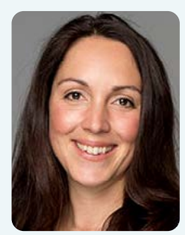


Gavin Knott (2021)
Monash University

Stephin Vervoort (2021)
Walter & Eliza Hall Institute of Medical Research

Michelle Boyle (2023)
Burnet Institute

Marian's research is at the cutting edge of the human body's response to cancer, infection, injury and aging.



Marian Burr (2019)
Australian National University

Lara Malins (2024)
Australian National University

International recognition for our Fellows

Shom Goel

Associate Professor Shom Goel has won a substantial USD $3 million (AUD $4.5 million) United States Department of Defence grant for his research into developing the next revolution in breast cancer treatment.

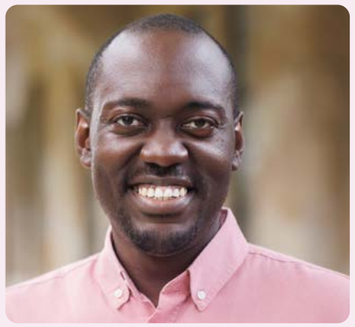
His research will focus on addressing a critical knowledge gap on senescent cancer cells – a specific type of ‘dormant’ cell state – and develop therapies that can successfully target or kill these cells, which has the potential to dramatically reduce breast cancer mortality.

About the Award

The Era of Hope Scholar Award is open internationally, only one or two awards are given each year, and it is rarely awarded outside of the USA. The award recognises creative and innovative individuals that go beyond conventional thinking in their field.

Loïc Yengo

Congratulations to Associate Professor Loïc Yengo on being awarded a University of California, San Francisco (UCSF) Presidential Chair Award. He will be appointed as a Distinguished Visiting Associate Professor in the UCSF Department of Epidemiology and Biostatistics, School of Medicine, for 3 months from January 2025. During this time, he will work on establishing the Centre for Diversity in Precision Health (CDPH) and building research capacity from diverse backgrounds. This appointment will immediately precede the start of Loïc’s Snow Fellowship and be a fantastic opportunity to increase his international profile and forge new collaborations.



About the Award

The UCSF Presidential Chair Award is intended to encourage new or interdisciplinary program development or to enhance quality in existing academic programs of the University. To contribute to the enrichment of campus academic life, UCSF allocates Presidential Chair funding of up to $150,000 to support the appointment of a distinguished visiting professor for up to one year. In addition to participating in research, instruction, or other creative activities, each incumbent is expected to present a major public lecture or series of lectures.

Awards, conferences and community engagement

Snow Fellows Stephin Vervoort from the Walter and Eliza Hall Institute of Medical Research and Arnold Ju from the University of Sydney have been honoured by the Australian Academy of Science.

Photo credit: Australian Academy of Science

2024 Ruth Stephens Gani Medal

Recognises outstanding contributions to research in human genetics, including clinical, molecular, population and epidemiological genetics and cytogenetics.

Doctor Stephin Vervoort’s

research has resulted in groundbreaking discoveries of fundamental regulatory mechanisms of RNAPII-driven gene expression, uncovering how these are dysregulated in cancer, and which component can be targeted therapeutically in cancer.

2024 John Booker Medal

Recognises outstanding research in engineering mechanics.

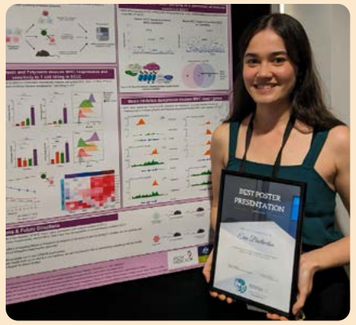
Associate Professor Arnold Ju’s

research has led to crucial discoveries including how cells use single receptors to ‘sense’, ‘read’ and ‘respond’ to mechanical cues by converting them into biological messages. This process helps us understand the mechanical way cells interact with their environment and communicate with each other.

International Antigen Processing & Presentation Conference, Cairns

Talks from **Associate Prof Marian Burr** and postdoctoral fellow **Dr Chelisa Cardinez** featured recent discoveries which explain how lung cancer and leukaemia cells can become resistant to immunotherapy by suppressing antigen presentation, together with the new therapeutic approaches they are developing to tackle this problem and bring new effective treatments to the clinic.

Pictured on the right is PhD student **Erin Brotherton** who won the conference prize for best poster presentation.



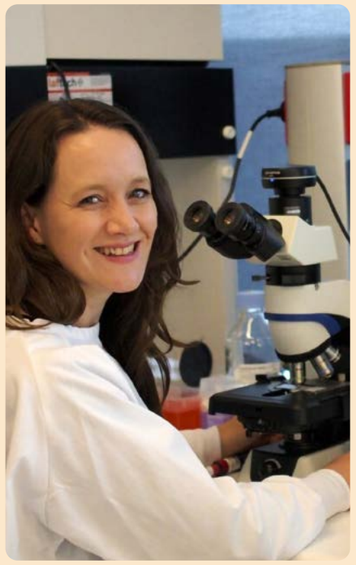
EMBO Workshop in Singapore – Chromatin biology in cancer

Cancer is a leading cause of death worldwide. It is a public health priority to tackle this burden, by developing better prognostic and therapeutic tools.

The past decades have greatly increased our knowledge of cancer biology, in particular cancer genetics. A parallel revolution has occurred in cancer epigenetics. It has become overwhelmingly clear that epigenetic phenomena, in other words, phenomena that modify genome activity without modifying the underlying gene sequence, play key roles in cancer initiation and progression. While epigenetic abnormalities drive cancer, they also open up new prognostic and therapeutic avenues.

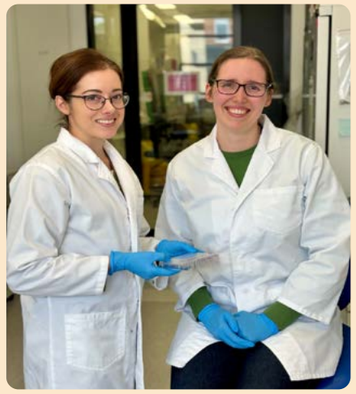
This workshop held in Singapore in April 2024 brought together outstanding researchers from all around the world in the field of epigenetics/chromatin biology, including **Dr Melany Eckersley-Maslin** (right).

Mel presented a novel method to uncover which genes in our genome are 'poised' so that they can be easily switched on in the future. She is now using this method to find out how breast cancer cells evolve and respond to new environments.



Marian Burr

Marian and her team also participated in the 2024 ACT Cancer Council Relay for Life, a 24 hour round the clock relay at the Australian Institute of Sport.



Cancer Council ACT Grant

Doctor Rachel Woodhouse, postdoctoral fellow in **Marian Burr's Lab** (left, on the right), was awarded a Cancer Council ACT Grant to support research to develop new treatments for B-cell lymphoma based on her recent discoveries.

PhD student Elizabeth Mee (above, third from right) represented the Burr Lab to receive the award at Government House and share the team's research with His Excellency the Honourable David Hurley, Governor General of Australia and Mrs Linda Hurley, Patron of Cancer Council ACT

Peter MacCallum Cancer Centre Research Symposium

Eckersley-Maslin Lab visiting under-graduate student **Immy Reed** (right) won the student poster presentation first prize. Immy has recently returned to Imperial College London to finish her undergraduate degree. Her experience in the lab has motivated her to pursue PhD studies.

International networking

Keystone Conference, Hannover, Germany

Professor James Hudson and PhD students **Lynn Devileé** and **Janice Reid** (right) attended the Keystone Cardiac Epigenetics and Gene Regulation meeting in Hannover, Germany, in April 2024.

Keystone meetings are smaller scientific meetings typically attended by world experts in a particular field. James was a Plenary Speaker while Lynn and Janice gave short talks at the meeting. Lynn was also awarded a conference travel award.

All Hudson Lab speakers shared some exciting Snow Medical Fellowship funded work. **Lynn** shared her research on how stopping human heart muscle cells from contracting can make them start to regenerate themselves, something that typically only heart cells from cold-blooded animals can do. Determining how this works could lead to heart regeneration drugs for people with damaged hearts.

Janice presented work on "cardiopedia", the most comprehensive dataset created so far, systematically covering how all ligands that bind to heart cells change heart function and the transcriptome using RNA sequencing. **James** presented work showing how cardiopedia data can be used to determine the signalling pathways activated in human failing hearts, and to identify new drug candidates to prevent activation of these pathways to help people suffering from heart failure.

All Hudson Lab presentations garnered a lot of interest, and a new collaboration with **Professor Tim McKinsey** from the University of Colorado, USA, was formed. Discussions with another Fellow in attendance, **Associate Professor Emily Wong**, resulted in a new collaboration on the epigenetic control of heart maturation, which will hopefully result in further enhanced human organoid heart models.

One conference highlight was a presentation by **Professor Wolf Reik** (pictured on the right), who left academia to head the Altos Cambridge Institute of Science, a new biotechnology company funded by Venture Capitalists and Jeff Bezos ($3 billion USD). The focus is on applying epigenetic reprogramming to reset cell age with the hope of rejuvenating cell function as we age. It was exciting to hear how basic science advances over the past 30 years have now led to Altos Labs' mission to reverse disease, injury and disability through cell rejuvenation.

Reik also highlighted how his well-funded program within the company still focuses on basic research and provides advantages to the research funded by government grants in the university system. In particular, core principles revolve around hyper-collaboration/teamwork, less bureaucracy and a clear focus on the mission. This involves the integration of science, administration and operations in the decision making so that everyone is working together towards the same goal.

James also discussed his lab's heart failure drug development with **Ariana Foinquinos** from Novo Nordisk. While she was in the lab of Professor Thomas Thum, she developed miR-132 inhibitors as heart failure drugs, later leading to a spinout company, Cardior, that was recently acquired by Novo Nordisk for $1 billion. Novo Nordisk is potentially interested in developing Hudson laboratory therapeutics and discussions are ongoing.

Snow Medical is growing

Tom Snow
Chair, Snow Medical Research Foundation

Derek Van Dyk
Director, Strategy

Ann-Marie Heinrich
Associate Director, Policy and Operations

Brian Murphy
Manager, Projects & Communications

Pich Chhay
Data Analyst

Chris Elasi
Manager, Transformation Funds

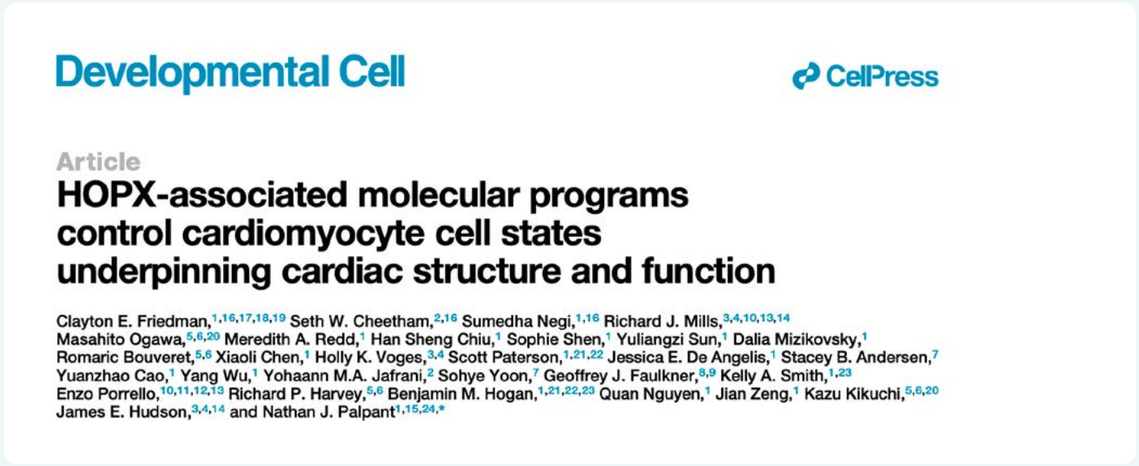
Inken Martin
Manager, Snow Fellowships

Meet the new manager of our Snow Fellowship Program

Inken Martin joined Snow Medical in 2023 and has responsibilities in managing and developing the Snow Fellowship Program and diverse other program grants. She is an experienced biomedical scientist with an MD/PhD from the University of Freiburg, Germany, and clinical and research training at Heidelberg University (Germany), the University of California at Berkeley (USA), and UNSW. Before joining Snow Medical she was a senior scientist at the Victor Chang Cardiac Research Institute in Sydney where she established a zebrafish cardiac genetics research program with focus on human dilated cardiomyopathy.

Hot off the press

A selection of latest publications from Fellow Laboratories

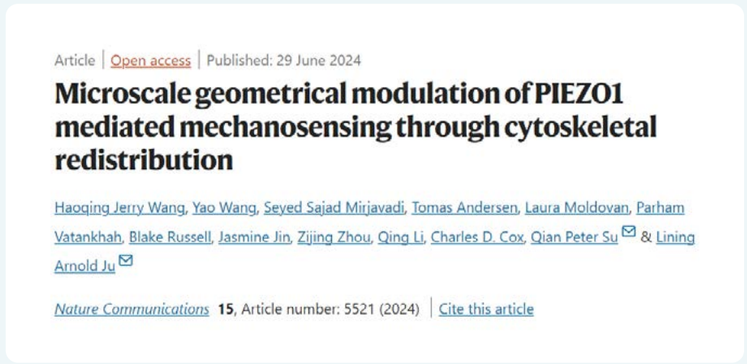


This paper, published in January 2024 in the prestigious journal **Developmental Cell,** was co-authored by **Prof James Hudson.** Using human organoid mini hearts, as well as other models, the study demonstrates the central role of the regulator protein, HOPX, in controlling cell growth and proliferation of heart muscle cells in development and disease. Next steps will involve testing if changes in the HOPX gene cause heart disease and if drugs targeting HOPX can promote heart regeneration after injury.

This important study was led by **Associate Professor Shom Goel** and published in the esteemed journal **Cancer Discovery.** It involves a phenomenon called 'cancer senescence', a state where cancer cells stop dividing, for example in response to cancer chemotherapy, but remain alive. This tricks the body into thinking that cancer may be in remission, while the reality is the cancer can emerge from senescence at a later time and cause further tumour growth and metastasis. This paper focused on CDK2 (Cyclin-Dependent Kinase 2), an enzyme that plays a crucial role in regulating the cell cycle, which is the process cells use to grow and divide. The authors conducted a comprehensive series of preclinical experiments to demonstrate that drugs that selectively block CDK2 can prevent cancer cells from escaping senescence and re-instate senescence in cells that have escaped. This paper has led to a first-in-human clinical trial that is currently ongoing.

This study by **Associate Professor Emily Wong** was published in the prestigious journal **Nature Communications.** While we understand increasingly well how gene expression is regulated in simple organisms, gene regulation in mammals is extremely complex. Unravelling this complexity is important, for example, so we can effectively target the genetic factors of disease in humans. In this study, Emily finds that the organisation of the genome, i.e. where genes are positioned and how they are arranged within larger structures, has profound impact on whether genes are expressed or not in cancer.

This paper, resulting from a collaboration between the laboratories of **Associate Professor Marian Burr** and Kate Sutherland at WEHI, was published in the Journal **Clinical Cancer Research.** Through their research focussed on developing new lung cancer treatments, the authors became suspicious that several cell lines modelling an aggressive type of lung cancer, called small cell lung cancer, were not what they seemed. After comprehensive molecular and pathological reassessment of these tumour lines it was confirmed that they instead represent a new aggressive type of cancer, termed SMARCA4-deficient undifferentiated tumour. This type of cancer can mimic small lung cancer leading to incorrect diagnoses. Marian's research establishes the first preclinical models of SMARCA4-deficient undifferentiated tumours with the aim to develop new treatments. In addition, these findings highlight the importance of careful characterisation of cancer models to ensure that they accurately represent the target disease, as these models are used for preclinical drug testing before deciding which therapies to take forward for clinical trials.



This study led by **Professor Arnold Ju,** and published in the prestigious journal **Nature Communications,** looks at how tiny changes in the structure of a cell's surrounding affect a specific cell membrane channel protein, PIEZO1, which senses and responds to mechanical pressure. Investigators used a special tool to watch how cells change internally in real time when they are gently squeezed by differently shaped pipettes. They discovered that sharper and tighter squeezes cause the cell's internal structure to rearrange and increase the activity of PIEZO1, resulting in more calcium flow into the cell. This shows that the cell's inner framework, especially a component called F-actin, is key to how cells feel and respond to physical changes around them. Mechano-sensing through PIEZO1 is particularly important in the cardiovascular system where blood flow and pressure are constantly changing.

A full list of 2024 publications from Snow Fellow laboratories is attached at the end.

Snow Medical Conference 2024

We recently hosted our Snow Fellows and some of their teams at the 3rd annual Snow Fellow Conference at Willinga Park. This year we welcomed over 60 delegates to the amazing grounds on the South Coast of NSW at Bawley Point.

We had the privilege to hear from three inspirational guest speakers, **Dr Doug Hilton AO, Georgina Byron AM,** and **Professor Chris Goodnow,** as well as from **Terry** and **Tom Snow.**

A whole-hearted thank you to **Ginette** and **the late Terry Snow** who hosted our conference, along with the brilliant support of the events team at Willinga Park.

This meeting provided the first opportunity for our newest Snow Fellows, Professor Lara Malins from ANU, and Associate Professor Loïc Yengo from UQ, to meet the rest of the cohort and members of the Snow family ahead of commencing their Snow Fellowship in 2025.

For the first time this year, we held a popular **Poster Session** to foster scientific exchange between the laboratory groups. Congratulations to our three poster session winners:

Snow Medical's Choice Award | Olivia Voulgaris from the Vervoort Lab

People's Choice Award | Michael Taylor from the Goel Lab, and Qing Wang from the Wong Lab

Conference attendees outside the conference centre

Guest Speaker, Georgina Byron AM

Snow Medical Conference 2024, Poster Session

"This conference is the most inspiring event for young scientists in the country. It makes team members feel that they are part of something bigger and reinforces the idea that it is good to think big and be brave."

Conference Attendee (2024), anonymous survey

Guest Speaker,
Doug Hilton AO

Terry Snow AM and
Tom Snow

Conference attendees touring
Willinga Park and the equine hospital

Ginette Snow
and Loïc Yengo

Snow Centre for Immune Health officially open

Prof Phil Hodgkin, Co-Director, Snow Centre for Immune Health, Tom and Ginette Snow, Prof Doug Hilton (former Executive Director of the WEHI), Terry Snow AM, Dr Vanessa Bryant, one of the Program Leads from the Snow Centre for Immune Health.

The Snow Centre for Immune Health officially commenced operation in July 2024

It has a bold and ambitious global mission to improve the lives of people with immune diseases, using a novel approach to immune health. The Centre will look at the immune system from a whole-of-system, whole-of-person perspective. The research program will decipher what factors give us good or poor immune health, thereby aiming to transform and accelerate personalised diagnosis and treatment for people suffering from immune diseases and dysfunction.

A major health challenge

Diseases caused or worsened by a dysfunctional immune system pose one of the greatest health challenges in society, affecting millions of people worldwide.

These conditions range from rare, serious genetic immune deficiencies to potentially debilitating chronic disorders such as lupus, multiple sclerosis, rheumatoid arthritis, allergies and asthma.

In Australia, allergy and immune diseases are among the fastest growing chronic conditions. Autoimmune diseases are a leading cause of death in women under 65. Worldwide, over 300 million people have asthma, including 1 in 9 Australians.

Treatments are limited. Blanket approaches are common. Most have no cures.

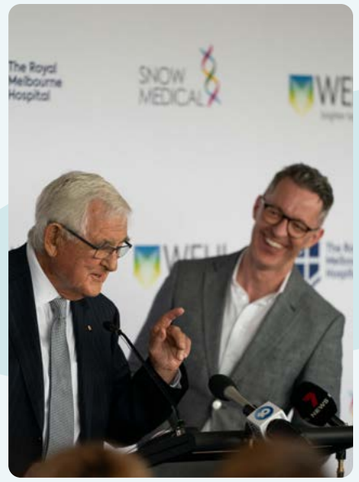
The Snow Centre research program will decipher what factors give us good or poor immune health, transforming and accelerating personalised diagnosis and treatment for people living with immune diseases and dysfunction. Over time, we will shift our approach from diagnosing and treating immune diseases, towards proactive and preventative care.

For more information visit
www.snowimmunehealth.org.au

Terry Snow AM, Magda Szubanski, Tom Snow and Dr Lauren Howson

Imagine a world where an immune health check was as routine as a heart check. Where immune diseases were not silent and devastating for millions of people. Where we can shift our approach from diagnosing and treating immune diseases, towards proactive and preventative care.

(From L to R) Prof Jo Douglass, Prof Alan Cowman AC, Ann-Marie Heinrich, Prof Shelly Dolan, Ginette Snow, Dr Vanessa Bryant and Prof Phil Hodgkin



Terry Snow AM and Tom Snow

Revolutionising immune health

To tackle these major global health challenges, the Snow Medical Research Foundation has partnered with the Walter and Eliza Hall Institute of Medical Research and the Royal Melbourne Hospital to establish the Snow Centre for Immune Health. The centre brings together leading Australian and international researchers with a shared mission to transform how we research and treat the immune system. The goal is to accelerate discoveries into the underlying features and markers of immune health, to identify disease causes early and target appropriate treatment.

The centre is funded by an initial commitment of up to $100 million over 10 years – one of the largest and longest running philanthropic partnerships in Australian history.

It is expected to employ more than 50 scientists, clinicians and staff within the first five years. Snow Medical's substantial, long- term support will allow researchers to pursue an ambitious and far- sighted research program, beyond the short-term funding largely available in Australia. It helps move away from incremental science to solving the grand challenges of immunology.

2025 indicative Snow Fellowship dates

- Expressions of Interest for the 2025 Snow Fellowship open in March and close in May 2025.
- Invitations to submit full applications are announced in July and close in September 2025.
- Interview invitations will be announced in December 2025.
- Interviews will be held in February 2026, with successful Fellows announced shortly after.

Research publications by Snow Fellow laboratories from January – September 2024

These peer reviewed publications are important in disseminating Snow funded science to the rest of the scientific community across the world.

January 2024

1. Friedman, C. E., Cheetham, S. W., Negi, S., Mills, R. J., Ogawa, M., Redd, M. A., Chiu, H. S., Shen, S., Sun, Y., Mizikovsky, D., Bouveret, R., Chen, X., Voges, H. K., Paterson, S., De Angelis, J. E., Andersen, S. B., Cao, Y., Wu, Y., Jafrani, Y. M. A., Yoon, S., Faulkner GJ, Smith KA, Porrello E, Harvey RP, Hogan BM, Nguyen Q, Zeng J, Kikuchi K**, Hudson J.E**. and Palpant, N. J. (2024). HOPX-associated molecular programs control cardiomyocyte cell states underpinning cardiac structure and function. Developmental Cell, 59(1), 91–107.e6. https://doi.org/10.1016/j.devcel.2023.11.012

2. Tolaney, S. M., **Goel, S**., Nadal, J., Denys, H., Borrego, M. R., Litchfield, L. M., Liu, J., Appiah, A. K., Chen, Y., & André, F. (2024). Overall Survival and Exploratory Biomarker Analyses of Abemaciclib plus Trastuzumab with or without Fulvestrant versus Trastuzumab plus Chemotherapy in HR+, HER2+ Metastatic Breast Cancer Patients. Clinical cancer research: an official journal of the American Association for Cancer Research, 30(1), 39–49. https://doi.org/10.1158/1078-0432.CCR-23-1209

3. Adler, B. A., Trinidad, M. I., Bellieny-Rabelo, D., Zhang, E., Karp, H. M., Skopintsev, P., Thornton, B. W., Weissman, R. F., Yoon, P. H., Chen, L., Hessler, T., Eggers, A. R., Colognori, D., Boger, R., Doherty, E. E., Tsuchida, C. A., Tran, R. V., Hofman, L., Shi, H., Wasko, K. M., Zhou Z, Xia C, Al-Shimary MJ, Patel JR, Thomas VCJX, Pattali R, Kan MJ, Vardapetyan A, Yang A, Lahiri A, Mazwell MF, Bamert RS, **Knott G.J**.,... Doudna, J. A. (2024). CasPEDIA Database: a functional classification system for class 2 CRISPR-Cas enzymes. Nucleic acids research, 52(D1), D590–D596. https://doi.org/10.1093/nar/gkad890

4. Chen, Y., Li, Z., Kong, F., **Ju, L. A**., & Zhu, C. (2024). Force-Regulated Spontaneous Conformational Changes of Integrins □5□1 and □V□3. ACS nano, 18(1), 299–313. https://doi.org/10.1021/acsnano.3c06253

5. Jin, J., Wang, H. J., Chen, Y. C., Russell, B., Sun, A., Wang, Y., & **Ju, L. A.** (2024). Fluorescence-coupled Micropipette Aspiration Assay to Investigate Red Blood Cell Mechanosensing. Journal of visualized experiments : JoVE, (203), 10.3791/66265. https://doi.org/10.3791/66265

6. Mbarek, H., Gordon, S. D., Duffy, D. L., Hubers, N., Mortlock, S., Beck, J. J., Hottenga, J. J., Pool, R., Dolan, C. V., Actkins, K. V., Gerring, Z. F., Van Dongen, J., Ehli, E. A., Iacono, W. G., Mcgue, M., Chasman, D. I., Gallagher, C. S., Schilit, S. L. P., Morton, C. C., Paré, G., **… Yengo L**, Davis L, Derks EM, Medland SE, Stefansson H, Stefansson K, Del Bene F, Reversade B, Montgomery GW, Boomsma D.I., Martin, N. G. (2024). Genome-wide association study meta-analysis of dizygotic twinning illuminates genetic regulation of female fecundity. Human reproduction (Oxford, England), 39(1), 240–257. https://doi.org/10.1093/humrep/dead247

Research publications by Snow Fellow laboratories from January - September 2024

February 2024

1. House, I. G., Derrick, E. B., Sek, K., Chen, A. X. Y., Li, J., Lai, J., Todd, K. L., Munoz, I., Michie, J., Chan, C. W., Huang, Y. K., Chan, J. D., Petley, E. V., Tong, J., Nguyen, D., Engel, S., Savas, P., Hogg, S. J., **Vervoort, S. J.**, Kearney, C. J., **Burr M.**, ... Beavis, P. A. (2024). CRISPR-Cas9 screening identifies an IRF1-SOCS1-mediated negative feedback loop that limits CXCL9 expression and antitumor immunity. Cell reports, 43(2), 113793. https://doi.org/10.1016/j.celrep.2024.113793

2. Periasamy, P., Joseph, C., Campos, A., Rajandran, S., Batho, C., **Hudson, J. E**., Sivakumaran, H., Kore, H., Datta, K., Yeong, J., & Gowda, H. (2024). Regulation of non-canonical proteins from diverse origins through the nonsense-mediated mRNA decay pathway. Proteomics, e2300361. Advance online publication. https://doi.org/10.1002/pmic.202300361

3. Seneviratne, J. A., Ho, W. W. H., Glancy, E., & **Eckersley-Maslin, M. A.** (2024). A low-input high resolution sequential chromatin immunoprecipitation method captures genome-wide dynamics of bivalent chromatin. Epigenetics & chromatin, 17(1), 3. https://doi.org/10.1186/s13072-024-00527-9

4. Glancy, E., Choy, N., & **Eckersley-Maslin, M. A.** (2024). Bivalent chromatin: a developmental balancing act tipped in cancer. Biochemical Society transactions, 52(1), 217–229. https://doi.org/10.1042/BST20230426

5. Cabrera-Mendoza, B., Wendt, F. R., Pathak, G. A., **Yengo, L**., & Polimanti, R. (2024). The impact of assortative mating, participation bias and socioeconomic status on the polygenic risk of behavioural and psychiatric traits. Nature human behaviour, 8(5), 976–987. https://doi.org/10.1038/s41562-024-01828-5

March 2024

1. Orlowska, M. K., Krycer, J. R., Reid, J. D., Mills, R. J., Doran, M. R., & **Hudson, J. E**. (2024). A miniaturized culture platform for control of the metabolic environment. Biomicrofluidics, 18(2), 024101. https://doi.org/10.1063/5.0169143

2. Greatbatch, C. J., Lu, Q., Hung, S., Tran, S. N., Wing, K., Liang, H., Han, X., Zhou, T., **Siggs, O. M**., Mackey, D. A., Liu, G. S., Cook, A. L., Powell, J. E., Craig, J. E., MacGregor, S., & Hewitt, A. W. (2024). Deep Learning-Based Identification of Intraocular Pressure-Associated Genes Influencing Trabecular Meshwork Cell Morphology. Ophthalmology science, 4(4), 100504. https://doi.org/10.1016/j.xops.2024.100504

3. Dietrich, C., Trub, A., Ahn, A., Taylor, M., Ambani, K., Chan, K. T., Lu, K. H., Mahendra, C. A., Blyth, C., Coulson, R., Ramm, S., Watt, A. C., Matsa, S. K., Bisi, J., Strum, J., Roberts, P., & **Goel, S**. (2024). INX-315, a Selective CDK2 Inhibitor, Induces Cell Cycle Arrest and Senescence in Solid Tumors. Cancer discovery, 14(3), 446–467. https://doi.org/10.1158/2159-8290.CD-23-0954

4. Istadi, A., Porazinski, S., & **Pajic, M**. (2024). Cancer variant modeling in vivo. Nature biotechnology, 42(3), 383–385. https://doi.org/10.1038/s41587- 023-02080-4

5. Achinger-Kawecka, J., Stirzaker, C., Portman, N., Campbell, E., Chia, K. M., Du, Q., Laven-Law, G., Nair, S. S., Yong, A., Wilkinson, A., Clifton, S., Milioli, H. H., Alexandrou, S., Caldon, C. E., Song, J., Khoury, A., Meyer, B., Chen, W., Pidsley, R., Qu, W., Gee JMW, Schmitt A, **Wong E.S**., Hickey TE, Lim E., Clark, S. J. (2024). The potential of epigenetic therapy to target the 3D epigenome in endocrine-resistant breast cancer. Nature structural & molecular biology, 31(3), 498–512. https://doi.org/10.1038/s41594-023-01181-7

6. Lo, T. L., Wang, Q., Nickson, J., van Denderen, B. J. W., Deveson Lucas, D., Chai, H. X., **Knott, G.** J., Weerasinghe, H., & Traven, A. (2024). The C-terminal protein interaction domain of the chromatin reader Yaf9 is critical for pathogenesis of Candida albicans. mSphere, 9(3), e0069623. https://doi.org/10.1128/msphere.00696-23

7. Djajawi, T. M., Pijpers, L., Srivaths, A., Chisanga, D., Chan, K. F., Hogg, S. J., Neil, L., Rivera, S. M., Bartonicek, N., Ellis, S. L., Lim Kam Sian, T. C. C., Faridi, P., Liao, Y., Pal, B., Behren, A., Shi, W., **Vervoort, S. J**., Johnstone, R. W., & Kearney, C. J. (2024). PRMT1 acts as a suppressor of MHC-I and anti- tumor immunity. Cell reports, 43(3), 113831. https://doi.org/10.1016/j.celrep.2024.113831

8. Li, Y., Xu, X., Wang, H. J., Chen, Y. C., Chen, Y., Chiu, J., Li, L., Wang, L., Wang, J., Tang, Z., Ren, L., Li, H., Wang, X., Jin, S., Wu, Y., Huang, M., **Ju, L. A**., & Fang, C. (2024). Endoplasmic Reticulum Protein 72 Regulates Integrin Mac-1 Activity to Influence Neutrophil Recruitment. Arteriosclerosis, thrombosis, and vascular biology, 44(3), e82–e98. https://doi.org/10.1161/ATVBAHA.123.319771

April 2024

1. Greatbatch, C. J., Lu, Q., Hung, S., Barnett, A. J., Wing, K., Liang, H., Han, X., Zhou, T., **Siggs, O**. M., Mackey, D. A., Cook, A. L., Senabouth, A., Liu, G. S., Craig, J. E., MacGregor, S., Powell, J. E., & Hewitt, A. W. (2024). High throughput functional profiling of genes at intraocular pressure loci reveals distinct networks for glaucoma. Human molecular genetics, 33(9), 739–751. https://doi.org/10.1093/hmg/ddae003

2. Cornejo-Páramo, P., Petrova, V., Zhang, X., Young, R. S., & **Wong, E. S**. (2024). Emergence of enhancers at late DNA replicating regions. Nature communications, 15(1), 3451. https://doi.org/10.1038/s41467-024-47391-5

3. Djajawi, T. M., Wichmann, J., **Vervoort, S. J.**, & Kearney, C. J. (2024). Tumor immune evasion: insights from CRISPR screens and future directions. The FEBS journal, 291(7), 1386–1399. https://doi.org/10.1111/febs.17003

4. Lv, K., Chen, S., Xu, X., Chiu, J., Wang, H. J., Han, Y., Yang, X., Bowley, S. R., Wang, H., Tang, Z., Tang, N., Yang, A., Yang, S., Wang, J., Jin, S., Wu, Y., Schmaier, A. H., **Ju, L. A.**, Hogg, P. J., & Fang, C. (2024). Protein disulfide isomerase cleaves allosteric disulfides in histidine-rich glycoprotein to regulate thrombosis. Nature communications, 15(1), 3129. https://doi.org/10.1038/s41467-024-47493-0

May 2024

1. Ng, J., Cai, L., Girard, L., Prall, O. W. J., Rajan, N., Khoo, C., Batrouney, A., Byrne, D. J., Boyd, D. K., Kersbergen, A. J., Christie, M., Minna, J. D., **Burr, M.** L., & Sutherland, K. D. (2024). Molecular and Pathologic Characterization of YAP1-Expressing Small Cell Lung Cancer Cell Lines Leads to Reclassification as SMARCA4-Deficient Malignancies. Clinical cancer research: an official journal of the American Association for Cancer Research, 30(9), 1846–1858. https://doi.org/10.1158/1078-0432.CCR-23-2360

2. **Wong E**. (2024). The nuance in DNA and transcription factor interactions. Nature reviews. Molecular cell biology, 25(4), 251. https://doi.org/10.1038/s41580-023-00685-w

3. Goh, T., Gao, L., Singh, J., Totaro, R., Carey, R., Yang, K., Cartwright, B., Dennis, M., **Ju, L. A.**, & Waterhouse, A. (2024). Platelet Adhesion and Activation in an ECMO Thrombosis-on-a-Chip Model. Advanced science (Weinheim, Baden-Wurttemberg, Germany), e2401524. Advance online publication. https://doi.org/10.1002/advs.202401524

4. Kemper, K. E., Sidorenko, J., Wang, H., Hayes, B. J., Wray, N. R., **Yengo, L.**, Keller, M. C., Goddard, M., & Visscher, P. M. (2024). Genetic influence on within-person longitudinal change in anthropometric traits in the UK Biobank. Nature communications, 15(1), 3776. https://doi.org/10.1038/s41467- 024-47802-7

5. Keaton, J. M., Kamali, Z., Xie, T., Vaez, A., Williams, A., Goleva, S. B., Ani, A., Evangelou, E., Hellwege, J. N., **Yengo, L.**, Young, W. J., Traylor, M., Giri, A., Zheng, Z., Zeng, J., Chasman, D. I., Morris, A. P., Caulfield, M. J., Hwang, S. J., Kooner, J. S., … Warren, H. R. (2024). Genome-wide analysis in over 1 million individuals of European ancestry yields improved polygenic risk scores for blood pressure traits. Nature genetics, 56(5), 778–791. https://doi.org/10.1038/s41588-024-01714-w

6. Zheng, Z., Liu, S., Sidorenko, J., Wang, Y., Lin, T., **Yengo, L.**, Turley, P., Ani, A., Wang, R., Nolte, I. M., Snieder, H., LifeLines Cohort Study, Yang, J., Wray, N. R., Goddard, M. E., Visscher, P. M., & Zeng, J. (2024). Leveraging functional genomic annotations and genome coverage to improve polygenic prediction of complex traits within and between ancestries. Nature genetics, 56(5), 767–777. https://doi.org/10.1038/s41588-024-01704-y

Research publications by Snow Fellow laboratories from January - September 2024

June 2024

1. Tan, J., Virtue, S., Norris, D. M., Conway, O. J., Yang, M., Bidault, G., Gribben, C., Lugtu, F., Kamzolas, I., Krycer, J. R., Mills, R. J., Liang, L., Pereira, C., Dale, M., Shun-Shion, A. S., Baird, H. J., Horscroft, J. A., Sowton, A. P., Ma, M., Carobbio, S., Petsalaki E, Murray AJ, Gershlick DC, Nathan JA, **Hudson J.E**. and Fazakerley, D. J. (2024). Limited oxygen in standard cell culture alters metabolism and function of differentiated cells. The EMBO journal, 43(11), 2127–2165. https://doi.org/10.1038/s44318-024-00084-7

2. Van Der Byl, W., Nüssing, S., Peters, T. J., Ahn, A., Li, H., Ledergor, G., David, E., Koh, A. S., Wagle, M. V., Deguit, C. D. T., de Menezes, M. N., Travers, A., Sampurno, S., Ramsbottom, K. M., Li, R., Kallies, A., Beavis, P. A., Jungmann, R., Bastings, M. M. C., Belz, G. T., **Goel S.**, … Parish, I. A. (2024). The CD8+ T cell tolerance checkpoint triggers a distinct differentiation state defined by protein translation defects. Immunity, 57(6), 1324–1344.e8. https://doi.org/10.1016/j.immuni.2024.04.026

3. Wang, H. J., Wang, Y., Mirjavadi, S. S., Andersen, T., Moldovan, L., Vatankhah, P., Russell, B., Jin, J., Zhou, Z., Li, Q., Cox, C. D., Su, Q. P., & **Ju, L. A.** (2024). Microscale geometrical modulation of PIEZO1 mediated mechanosensing through cytoskeletal redistribution. Nature communications, 15(1), 5521. https://doi.org/10.1038/s41467-024-49833-6

4. Liu, J., Tan, Y. Y., Zheng, W., Wang, Y., **Ju, L. A.**, & Su, Q. P. (2024). Nanoscale insights into hematology: super-resolved imaging on blood cell structure, function, and pathology. Journal of nanobiotechnology, 22(1), 363. https://doi.org/10.1186/s12951-024-02605-2

July 2024

1. Pereira, B. A., Ritchie, S., Chambers, C. R., Gordon, K. A., Magenau, A., Murphy, K. J., Nobis, M., Tyma, V. M., Liew, Y. F., Lucas, M. C.,Naeini, M. M., Barkauskas, D. S., Chacon-Fajardo, D., Howell, A. E., Parker, A. L., Warren, S. C., Reed, D. A., Lee, V., Metcalf, X. L., Lee, Y. K.,... Pajic M.,Parker BL, Herrmann D, Cox TR, and Timpson, P. (2024). Temporally resolved proteomics identifies nidogen-2 as a cotarget in pancreatic cancer that modulates fibrosis and therapy response. Science advances, 10(27), eadl1197. https://doi.org/10.1126/sciadv.adl1197

2. Costacurta, M., Sandow, J. J., Maher, B., Susanto, O., Vervoort, S. J., Devlin, J. R., Garama, D., Condina, M. R., Steele, J. R., Kahrood, H. V., Gough, D., Johnstone, R. W., & Shortt, J. (2024). Mapping the IMiD-dependent cereblon interactome using BioID-proximity labelling. The FEBS journal, 10.1111/febs.17196. Advance online publication. https://doi.org/10.1111/febs.17196

3. White, A. M., Schwartz, B. D., Gardiner, M. G., & **Malins, L. R**. (2024). Total Synthesis of a Peptide Diatom Sex Pheromone Bearing a Sulfated Aspartic Acid. Organic letters, 10.1021/acs.orglett.4c02004. Advance online publication. https://doi.org/10.1021/acs.orglett.4c02004

4. Mancino S, Seneviratne J, Mupo A, Krueger F, Oxley D**, Eckersley-Maslin MA**, and Teixeira da Rocha S. (2024) Exploring the Stability of Genomic Imprinting and X-Chromosome Inactivation in the Aged Brain. AgingBio, 2, e20240030. https://doi.org/10.59368/agingbio.20240030.

5. Greatbatch, C. J., Lu, Q., Hung, S., Barnett, A. J., Wing, K., Liang, H., Han, X., Zhou, T., **Siggs, O**. M., Mackey, D. A., Cook, A. L., Senabouth, A., Liu, G. S., Craig, J. E., MacGregor, S., Powell, J. E., & Hewitt, A. W. (2024). High throughput functional profiling of genes at intraocular pressure loci reveals distinct networks for glaucoma. Human molecular genetics, 33(9), 739–751. https://doi.org/10.1093/hmg/ddae003

6. Cornejo-Páramo, P., Petrova, V., Zhang, X., Young, R. S., & **Wong, E. S**. (2024). Emergence of enhancers at late DNA replicating regions. Nature communications, 15(1), 3451. https://doi.org/10.1038/s41467-024-47391-5

7. Djajawi, T. M., Wichmann, J., **Vervoort, S. J.**, & Kearney, C. J. (2024). Tumor immune evasion: insights from CRISPR screens and future directions. The FEBS journal, 291(7), 1386–1399. https://doi.org/10.1111/febs.17003

8. Lv, K., Chen, S., Xu, X., Chiu, J., Wang, H. J., Han, Y., Yang, X., Bowley, S. R., Wang, H., Tang, Z., Tang, N., Yang, A., Yang, S., Wang, J., Jin, S., Wu, Y., Schmaier, A. H., **Ju, L. A.**, Hogg, P. J., & Fang, C. (2024). Protein disulfide isomerase cleaves allosteric disulfides in histidine-rich glycoprotein to regulate thrombosis. Nature communications, 15(1), 3129. https://doi.org/10.1038/s41467-024-47493-0

9. Fjermeros K, Ghannoum S, Geisler SB, Bhargava S, (...), **Goel S**, Koff A, Tekpli X, Kristensen VN, Geisler J. (2024) The NEOLETRIB trial: neoadjuvant treatment with Letrozole and Ribociclib in ER-positive, HER2-negative breast cancer. *Future Oncol*. July 29, 2024. https://doi.org/10.1080/14796694.2024.2377531

Research publications by Snow Fellow laboratories from January - September 2024

August 2024

1. Jovanovic B, Church SE, Gorman KM, North K, Richardson ET, DiLullo M, Attaya V, Kasparian J, Mohammed-Abreu A, Kirkner G, Hughes ME, Lin NU, Mittendorf EA, Schnitt SJ, Tolaney SM, Goel S. (2024). Integrative multi-omic profiling of triple-negative breast cancer for identifying suitable therapies. Clin Cancer Res. 2024 Aug 13. https://doi.org/10.1158/1078-0432.CCR-23-1242

2. Kolovos A, Hassall MM, **Siggs OM**, Souzeau E, Craig JE. (2024). Polygenic Risk Scores Driving Clinical Change in Glaucoma. Annu Rev Genomics Hum Genet. 2024 Aug;25(1):287-308. https://doi.org/10.1146/annurev-genom-121222-105817

3. Engelhardt D, Nordberg P, Knerr L, **Malins LR**. (2024). Accessing Therapeutically-Relevant Multifunctional Antisense Oligonucleotide Conjugates Using Native Chemical Ligation. Angew Chem Int Ed Engl. 2024 Aug 11:e202409440. https://doi.org/10.1002/anie.202409440

4. Lawrence N, Handley TNG, de Veer SJ, Harding MD, Andraszek A, Hall L, Raven KD, Duffy S, Avery VM, Craik DJ, **Malins LR**, McMorran BJ. (2024). Enhancing the Intrinsic Antiplasmodial Activity and Improving the Stability and Selectivity of a Tunable Peptide Scaffold Derived from Human Platelet Factor 4. ACS Infect Dis. 2024 Aug 9;10(8):2899-2912. https://doi.org/10.1021/acsinfecdis.4c00276

5. Colino-Sanguino Y, Rodriguez de la Fuente L, Gloss B, Law AMK, Handler K, **Pajic M**, Salomon R, Gallego-Ortega D, Valdes-Mora F. Performance comparison of high throughput single-cell RNA-Seq platforms in complex tissues. Heliyon. 2024 Aug 30;10(17):e37185. https://doi.org/10.1016/j.heliyon.2024.e37185

September 2024

1. Hollitt GL, Keane MC, Nguyen TT, Hassall MM, **Siggs OM**, Craig JE. Healthcare professionals' knowledge and attitudes towards polygenic risk testing for glaucoma., Souzeau E.Clin Exp Ophthalmol. 2024 Sep 8. https://doi.org/10.1111/ceo.14438

2. Lelliott EJ, Naddaf J, Ganio K, Michie J, Wang S, Liu L, Silke N, Ahn A, Ramsbottom KM, Brennan AJ, Freeman AJ, **Goel S**, **Vervoort SJ**, Kearney CJ, Beavis PA, McDevitt CA, Silke J, Oliaro. Intracellular zinc protects tumours from T cell-mediated cytotoxicity. J.Cell Death Differ. 2024 Sep 11. https://doi.org/10.1038/s41418-024-01369-4

3. **Boyle, M**. J., Engwerda, C. R., & Jagannathan, P. (2024). The impact of Plasmodium-driven immunoregulatory networks on immunity to malaria. Nat Rev Immunol. 2024 Sep;24(9):637-653. https://doi.org/10.1038/s41577-024-01041-5

4. Inoue M, **Malins LR**, Renata H. Radical Reactions for the Construction and Transformation of Complex Molecules. Org Lett. 2024 Sep 20;26(37):7775-7777. https://doi.org/10.1021/acs.orglett.4c03159

5. Liu Y, Huang T, Yap NA, Lim K, **Ju LA.** Harnessing the power of bioprinting for the development of next-generation models of thrombosis. Bioact Mater. 2024 Sep 5;42:328-344. https://doi.org/10.1016/j.bioactmat.2024.08.040

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